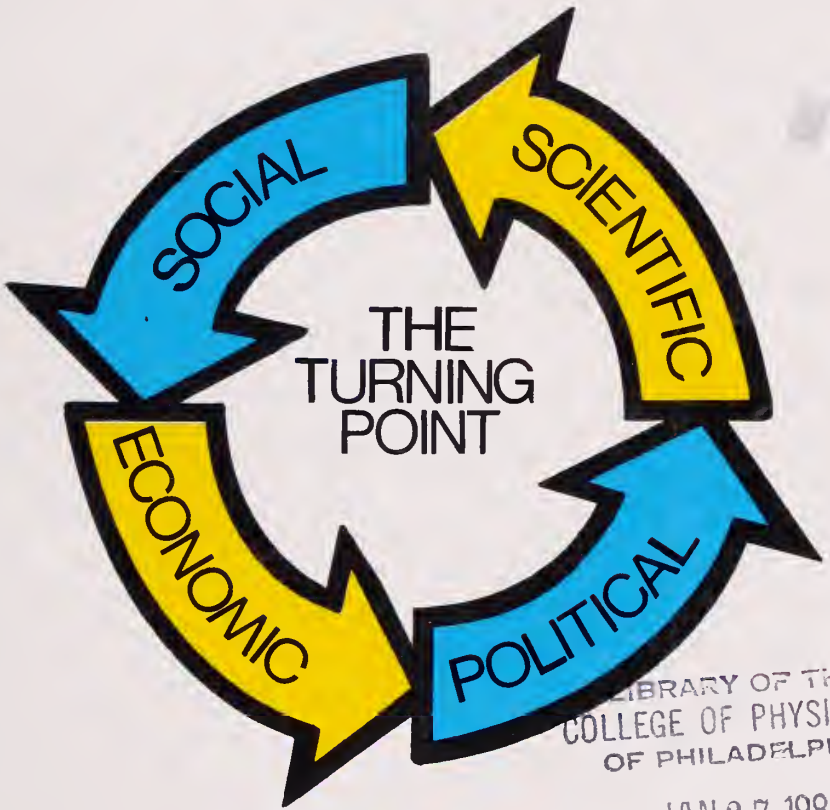
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January 1983
Volume 81
Number 1

The Journal Of The Kentucky Medical Association



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1. National Interagency Council on Smoking and Health. *The Smoking Digest.* Progress Report on a Nation Kicking the Habit. 1977.

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Before prescribing, please consult full product information, a brief summary of which follows:

Indications: For relief of acute bronchial asthma and for reversible bronchospasm associated with chronic bronchitis and emphysema

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Warnings: Status asthmaticus is a medical emergency. Excessive doses may be expected to be toxic.

Usage in Pregnancy: Safe use in pregnancy has not been established; do not use in pregnant women unless the potential benefits outweigh the possible hazards.

Precautions: Use with caution in patients with severe cardiac disease, hypertension, hyperthyroidism, acute myocardial injury, congestive heart failure, or peptic ulcer. Chronic high dosage is usually associated with gastrointestinal irritation.

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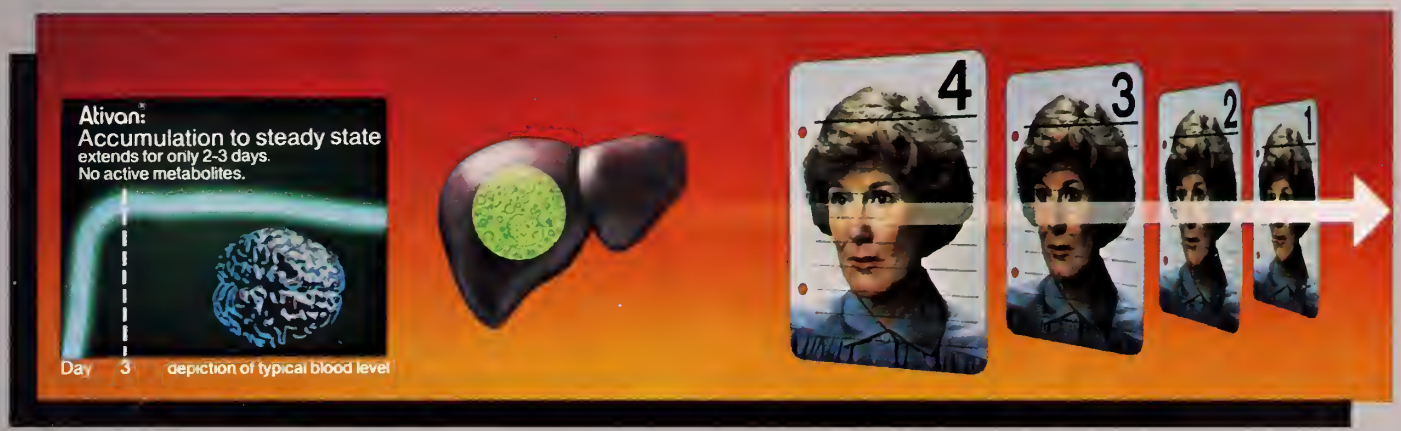
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References:
1. Klotz U, Reimann I: N Engl J Med *302*:1012-1014, 1980.
2. Desmond PV, Patwardhan RV, Schenker S, et al: Ann Intern Med *93*:266-268, 1980.
3. Patwardhan RV, Yarborough GW, Desmond PV, et al: Gastroenterology *79*:912-916, 1980.
4. Sellers EM, Naranjo CA, Peachey JE: N Engl J Med *305*:1255-1262, 1981.
5. Ruffalo RL, Thompson JF, Segal JL: South Med J *74*:1075-1078, 1981.

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*Pharmacokinetics cannot as yet be directly related to efficacy.
†All benzodiazepines produce additive effects when given with CNS depressants such as barbiturates or alcohol

See important information on following page.

Ativan® for (lorazepam) Anxiety

Brief Summary of Prescribing Information.

Indications and Usage: Management of anxiety disorders or short-term relief of symptoms of anxiety or anxiety associated with depressive symptoms. Anxiety or tension associated with stress of everyday life usually does not require treatment with an anxiolytic.

Effectiveness in long-term use, i.e., more than 4 months, has not been assessed by systematic clinical studies. Reassess periodically usefulness of the drug for the individual patient

Contraindications: Known sensitivity to benzodiazepines or acute narrow-angle glaucoma

Warnings: Not recommended in primary depressive disorders or psychoses. As with all CNS-acting drugs, warn patients not to operate machinery or motor vehicles, and of diminished tolerance for alcohol and other CNS depressants.

Physical and Psychological Dependence: Withdrawal symptoms like those noted with barbiturates and alcohol have occurred following abrupt discontinuance of benzodiazepines (including convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Addiction-prone individuals, e.g. drug addicts and alcoholics, should be under careful surveillance when on benzodiazepines because of their predisposition to habituation and dependence. Withdrawal symptoms have also been reported following abrupt discontinuance of benzodiazepines taken continuously at therapeutic levels for several months.

Precautions: In depression accompanying anxiety, consider possibility for suicide.

For elderly or debilitated patients, initial daily dosage should not exceed 2mg to avoid oversedation. Terminate dosage gradually since abrupt withdrawal of any antianxiety agent may result in symptoms like those being treated. anxiety, agitation, irritability, tension, insomnia and occasional convulsions. Observe usual precautions with impaired renal or hepatic function. Where gastrointestinal or cardiovascular disorders coexist with anxiety, note that lorazepam has not been shown of significant benefit in treating gastrointestinal or cardiovascular component. Esophageal dilation occurred in rats treated with lorazepam for more than 1 year at 6mg/kg/day. No effect dose was 1.25mg/kg/day (about 6 times maximum human therapeutic dose of 10mg/day). Effect was reversible only when treatment was withdrawn within 2 months of first observation. Clinical significance is unknown; but use of lorazepam for prolonged periods and in geriatrics requires caution and frequent monitoring for symptoms of upper G.I. disease. Safety and effectiveness in children under 12 years have not been established.

ESSENTIAL LABORATORY TESTS: Some patients have developed leukopenia; some have had elevations of LDH. As with other benzodiazepines, periodic blood counts and liver function tests are recommended during long-term therapy.

CLINICALLY SIGNIFICANT DRUG INTERACTIONS: Benzodiazepines produce CNS depressant effects when administered with such medications as barbiturates or alcohol.

CARCINOGENESIS AND MUTAGENESIS: No evidence of carcinogenic potential emerged in rats during an 18-month study. No studies regarding mutagenesis have been performed

PREGNANCY: Reproductive studies were performed in mice, rats, and 2 strains of rabbits. Occasional anomalies (reduction of tarsals, tibia, metatarsals, malrotated limbs, gastroschisis, malformed skull and microphthalmia) were seen in drug-treated rabbits without relationship to dosage. Although all these anomalies were not present in the concurrent control group, they have been reported to occur randomly in historical controls. At 40mg/kg and higher, there was evidence of fetal resorption and increased fetal loss in rabbits which was not seen at lower doses. Clinical significance of these findings is not known. However, increased risk of congenital malformations associated with use of minor tranquilizers (chlordiazepoxide, diazepam and meprobamate) during first trimester of pregnancy has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, use of lorazepam during this period should almost always be avoided. Possibility that a woman of child-bearing potential may be pregnant at institution of therapy should be considered. Advise patients if they become pregnant to communicate with their physician about desirability of discontinuing the drug. In humans, blood levels from umbilical cord blood indicate placental transfer of lorazepam and its glucuronide.

NURSING MOTHERS: It is not known if oral lorazepam is excreted in human milk like other benzodiazepines. As a general rule, nursing should not be undertaken while on a drug since many drugs are excreted in milk.

Adverse Reactions, if they occur, are usually observed at beginning of therapy and generally disappear on continued medication or on decreasing dose. In a sample of about 3,500 anxious patients, most frequent adverse reaction is sedation (15.9%), followed by dizziness (6.9%), weakness (4.2%) and unsteadiness (3.4%). Less frequent are disorientation, depression, nausea, change in appetite, headache, sleep disturbance, agitation, dermatological symptoms, eye function disturbance, various gastrointestinal symptoms and autonomic manifestations. Incidence of sedation and unsteadiness increased with age. Small decreases in blood pressure have been noted but are not clinically significant, probably being related to relief of anxiety

Overdosage: In management of overdosage with any drug, bear in mind multiple agents may have been taken. Manifestations of overdosage include somnolence, confusion and coma. Induce vomiting and/or undertake gastric lavage followed by general supportive care, monitoring vital signs and close observation. Hypotension, though unlikely, usually may be controlled with Levarterenol Bitartrate Injection U.S.P. Usefulness of dialysis has not been determined.

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Anxiety

Dosage: **Individualize for maximum beneficial effects. Increase dose gradually when needed, giving higher evening dose before increasing daytime doses. Anxiety, usually 2-3mg/day given b.i.d. or t.i.d.; dosage may vary from 1 to 10mg/day in divided doses. For elderly or debilitated, initially 1-2mg/day; insomnia due to anxiety or transient situational stress, 2-4mg h.s.**

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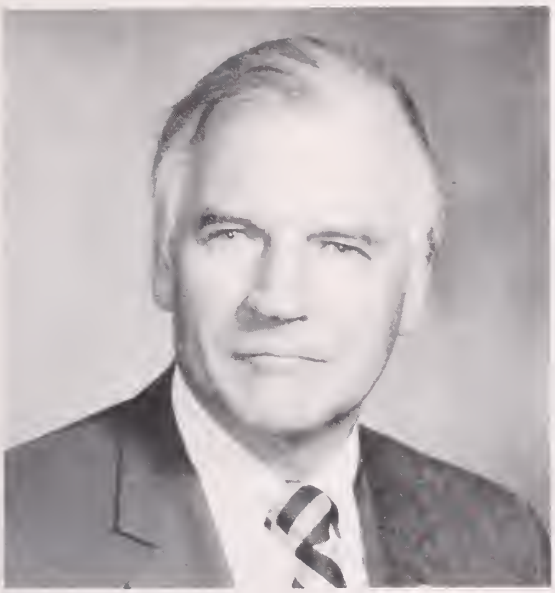
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PRESIDENT'S PAGE



The first of the year message traditionally seems to be geared to look to the new year with great optimism and an upbeat motif. The winds of change are howling so loudly that I doubt that we can look at the coming year or years with any such optimism. The entitlement programs fostered by 40 years of a profligate Congress are breaking this country faster and increasing inflation more rapidly than is generally appreciated. Sooner or later some courageous Congress or Administration is going to have to go tackle them.

Among the highest profiles among these entitlements is the cost of medical care. There surely will be a serious attack on these costs. Congress, whether it be Republican or Democrat, and no matter how sympathetic to medicine, is not going to miss the chance to cut down a small minority, of "wealthy, cadillac driving, arrogant, avaricious, apathetic individuals," namely we physicians. Fortunately, I think our present-day physicians are better able to deal with change than with some past generations. The formation or preferred provider organizations, such as the new Physicians Alliance for Excellence in Lexington, and the City Care Plan for Louisville may serve as guide posts to help us. Members of the profession in more modest sized communities would do well to look to these examples—not to copy but to get modified ideas suited to their communities.

Fortunately, the Kentucky Medical Association has a first rate staff that keeps us abreast of changes and trends, and under the excellent leadership of Dr. Blackburn, I think we can look forward to a year of progress with a unified front to face the future. Dr. Blackburn's planned meeting in March to discuss Socioeconomics is very well timed.

The medical malpractice crisis continues in an even more severe form. Your Kentucky Medical Insurance Company is here to stay and despite the necessity of raising premiums from time to time, I feel it will be doing a better job for you than any of the other insurance companies available. President, Carl Wedekind, has obtained for us the best professional underwriting advice available. His broad background and contacts with the Louisville "Movers and Shakers" has enabled the company to come up with new ideas and new thrusts to meet arising problems. The Kentucky Medical Insurance Company policy to fight in court all of the unnecessary and frivolous claims rather than settling for small amounts of money, will surely bear fruit as time passes.

The passing of the various government planning groups is a great boon to the state but other problems of greater magnitude will, I am sure, take their places. In the coming months and year, I urge all of the members of this association to keep up with the *Journal* and the letters you receive so that we may meet together the challenges presented to us.

A happy New Year to you all!

James B. Holloway, Jr., M.D.
KMA President-Elect

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Eastern Standard Time

8:30 a.m.	Registration—First Floor Coffee—Fifth Floor Displays—Fourth Floor
	MORNING SESSION
8:55 a.m.	Welcome, Thomas F. Whayne, Jr., M.D.
Moderator:	James W. Bard, M.D.
9:00 a.m.	"Indication for Surgery of Upper Extremities in Rheumatoid Arthritis" Ralph A. Herms, M.D.
9:25 a.m.	"Fitness Evaluation for Athletics" W. Ben Kibler, M.D.
9:50 a.m.	"Diagnosis and Treatment of Bleeding Disorders" Eric C. Wilson, M.D.
10:15 a.m.	Coffee Break—Fourth Floor Displays—Fourth Floor
10:45 a.m.	"Reye's Syndrome—Update" James A. Bottiggi, M.D.
11:10 a.m.	"Evaluation of Carotid Occlusive Disease" Robert M. Cooper, M.D.
11:35 a.m.	"The Faces of Systemic Diseases" Harold Perry, M.D. The Sixteenth Annual Carl Fortune Lecture
12:25 p.m.	Lunch—Sixth Floor
	AFTERNOON SESSION
Moderator:	John C. Sartini, M.D.
2:00 p.m.	"Endoscopic Sphincterotomy and Common Duct Stone Extraction" Jerry L. Yon, M.D.
2:25 p.m.	"Adjuvant Chemotherapy" William D. Medina, M.D.
2:50 p.m.	Stretch
3:00 p.m.	"New Topics in Infectious Diseases" Ardis D. Hoven, M.D.
3:25 p.m.	"Coal Worker Pneumoconisis" Bruce C. Broudy, M.D.
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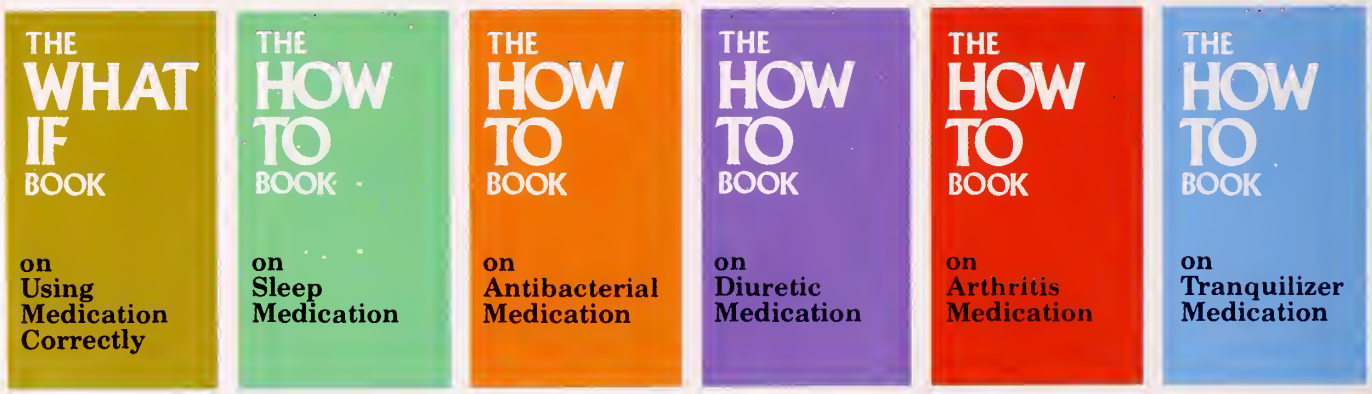
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SCIENTIFIC

C. T. Evaluation of a Peripheral Arterio-Venous Malformation

SAM KRINSKY, M.D., Ph.D., SARA E. ZIEVERINK, M.D.
and MAGDY ABASKARON, M.D.

IN 1968 Angervall[1] *et al* described the angiographic findings of vascular malformations in skeletal muscle and their possible confusion with muscular tumors.

We recently had the opportunity to study a young man with an arterio-venous malformation in the popliteal fossa. This paper presents the computerized tomographic findings in addition to other radiographic modalities.

Case Report

The patient was a 23-year-old white man whose chief complaint was a lump in the left knee. He noted a mass in the left popliteal fossa for four months prior to admission. There was some question of increasing size and pain in the area, and consequently the patient was admitted with the tentative diagnosis of synovioma, or synovial sarcoma.

His family history was positive for diabetes mellitus and his mother had a history of a brain tumor. Other past medical history was non-contributory and specifically no history of trauma was present.

Physical exam including vital signs was normal with the exception of a 3cm x 4cm soft tissue mass in the left popliteal fossa. Dorsal pedal pulses were 2+ and bilaterally equal. No lymphadenopathy was noted. Routine lab studies were normal.

Routine x-rays showed a soft tissue mass in the popliteal fossa without bone involvement. A pre-admission xerogram revealed slight specks of calcium in the mass. (Fig 1)

Discussion

With the tentative diagnosis of synovioma or synovial sarcoma plain films, ultrasound and anteriography were obtained. These studies were not helpful in determining extent of the lesion or establishing benignancy versus malignancy.

However, computerized tomography of both lower extremities with and without contrast enhancement (Fig 2, 3, 4) yielded insight into the nature of the lesion including its extent. C.T. served as a guide for surgical excision showing the lesion's location within the semi-tendinous muscle and preservation of surrounding fat and fascial planes. This gave support for the diagnosis of a benign lesion. Calcifications identified by C.T. were comparable with previously described roentgen findings in thrombosed arterio-venous malformations,[2] and our initial differential included a post traumatic myositis ossificans or arterio-venous malformation.

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Fig. 1

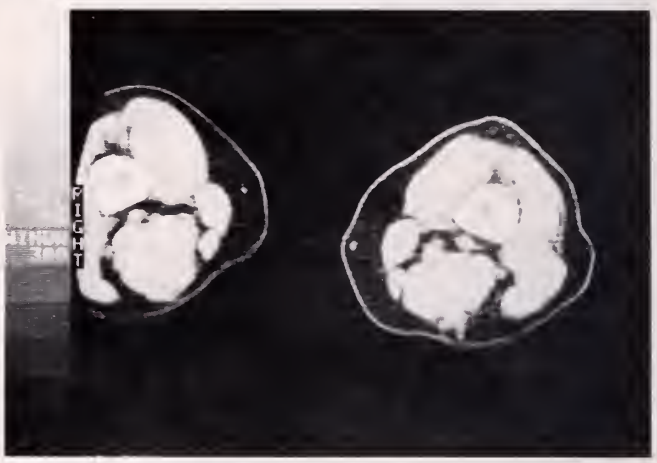


Fig. 2

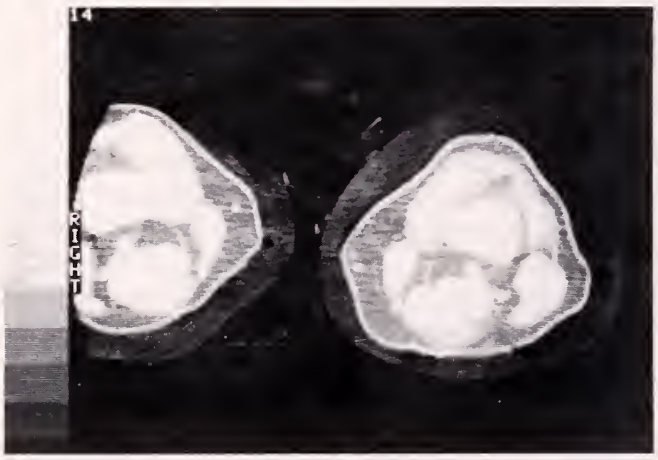


Fig. 3

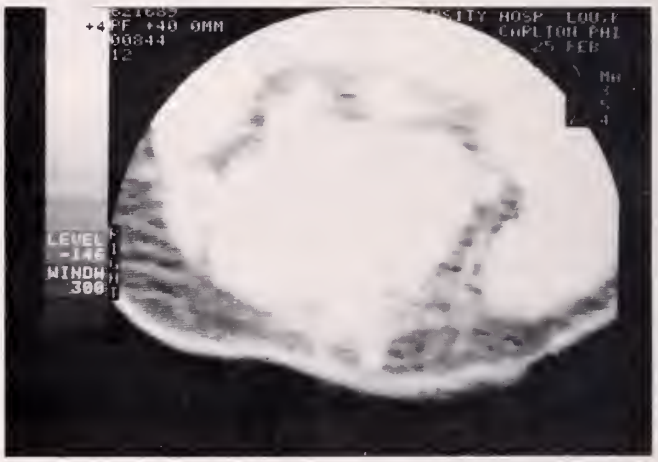


Fig. 4

The patient was taken to surgery and the lesion was excised. Pathologic diagnosis was A-V malformation with thrombosis and recanalization.

Conclusion

The above case demonstrates the value of C.T. in clarifying the nature and limits of peripheral extremity lesions and in giving accurate presurgical guidelines.

Summary

A thrombosed arterio-venous malformation in the left popliteal fossa is described using computerized tomography. Other x-ray studies were performed but CT was unique in its imaging clarity and in the presurgical information it gave.

References 1. Angervall L, Nilsson L, Stener B, et al: Angiographic, microangiographic and histologic study of vascular malformation in striated muscle. *Acta Radiol* 7:65-71, 1968. 2. Szilagyi D, Smith R, Elliott J, *et al:* Congenital Arteriovenous Anomalies of the Limbs. *Arch Surg* 111:423-429, 1976.

Single Channel Cochlear Implant for Treatment of Total Sensori-Neural Deafness

A Report of Two Cases

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Cochlear implants for the treatment of total sensori-neural deafness are currently undergoing clinical trials. Two patients from the Kentucky region who have received implants are reported. The differential diagnosis of sensori-neural deafness, requirements for participation in the trial, and the cochlear implant system are discussed.

HEARING loss traditionally has been divided into two broad categories: conductive and sensori-neural. The availability of cochlear implants demands a more detailed analysis of sensori-neural hearing loss. House and Brackmann[3] have proposed the differential diagnosis of four types of sensori-neural deafness. The first type is sensory loss, in which the hair cells of the cochlea are defective and are unable to stimulate the auditory nerve. The second type is neural, in which the auditory nerve is unable to transmit impulses generated by intact hair cells. The third type is dysfunction of brain stem structures which relay impluses from the auditory nerve to the cortex. The fourth type is termed central and exists when the brain is unable to make meaningful interpretations of information provided by an intact peripheral sensory system. Most sensori-neural deafness is mixed. For example, following destruction of hair cells many fibers in the auditory nerve degenerate. Therapy by means of a cochlear implant is effective only when the type of loss is primarily sensory and where there are at least some surviving neurons.

The precise differential diagnosis of sensori-neural hearing loss requires sophisticated testing, including electrocochleography, brain stem audiometry, and cortical evoked response audiometry.[3] However, for clinical purposes, it is only necessary to demonstrate that the patient is totally deaf via standard audiometry and that a portion of the neural pathway is complete except for hair cells. The latter is established through promontory electrical stimulation. A needle is inserted through the tympanic membrane under local anesthesia onto the promontory. A small current is then passed into the auditory nerve. If the patient reports a sensation of sound then it has been proven that the neural pathway is at least partially intact. Of a group of 225 patients tested in this manner by House and Brackmann,[3] about two-thirds were found to respond to electrical stimulation and all who responded and subsequently received a cochlear implant benefited from the implant.

The cochlear implant is currently undergoing clinical trials which require specific criteria for participation.[4] Locally, only patients over 18 years old who became deaf post-lingually are accepted. The candidate undergoes an extensive pre-operative evaluation. Audiologic evaluation, including a hearing aid trial, is undertaken. Patients must have no auditory response better than 90 dB at any frequency in either ear. A standard questionnaire is used to determine the etiology of the deafness. The patient is instructed in what may be expected from an implant and is subsequently tested on this information. Psychological evaluation of the patient's motivation for using the implant is also included.

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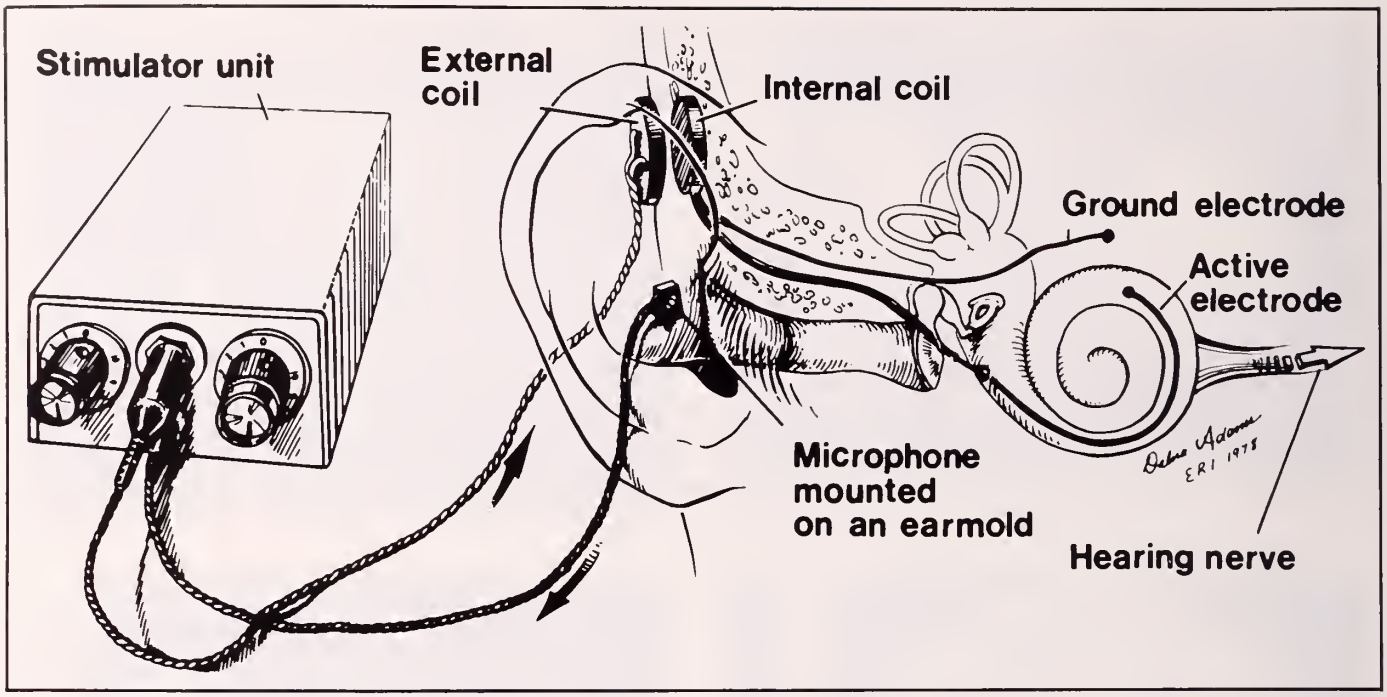


Fig. 1: Design of the cochlear implant system.

Method

The internal coil and electrodes are implanted with the patient under general anesthesia. Using a postauricular incision a complete mastoidectomy is performed after which the middle ear is entered through the facial recess and the round window exposed. The stimulus electrode is passed into the scala tympani through a small hole in the round window. The reference electrode is then passed into the eustachian tube. The internal coil is placed in a depression drilled into the temporal bone and the connecting wires are imbedded in a groove cut in this bone. The total procedure takes one to two hours and a two to four day hospital stay is involved. The patient receives the stimulator unit two months after surgery at which time he undergoes 20 hours of intense aural rehabilitation. Follow-up is lifelong.

In this paper we report two patients from the Kentucky region who have received implants.

Case Reports

Case #1: A 21-year-old man at age 16 developed total bilateral sensori-neural hearing loss following meningitis. In December 1979, he received a cochlear implant at the Ear Research Institute in Los Angeles, California. Since the operation, there have been considerable problems with mechanical failure which have limited the patient's use of the device to about two months. No specific problems were reported while actually using the unit. He uses the unit primarily while watching movies, when he is alone or with one or two people. Crowded places and noisy environments are difficult for him while using the unit. The implant has not improved the patient's lip reading ability, possibly because of his limited experience using the device.

Case #2: The patient is a 42-year-old man who suffered bilateral hearing loss in 1950 following meningitis. He underwent a cochlear implant procedure in January 1980, in Louisville, Kentucky. Following the implant he could distinguish male and female voices, hear the telephone ringing, and could occasionally differentiate musical instruments. He also reported improvement in his lip reading ability. In March 1980, he could no longer hear any sounds. Revision of the internal prosthesis was done in August 1980 at which time broken ground wires were found and the implant was replaced. Following the revision, he had return of hearing abilities which he had had with the first implant.

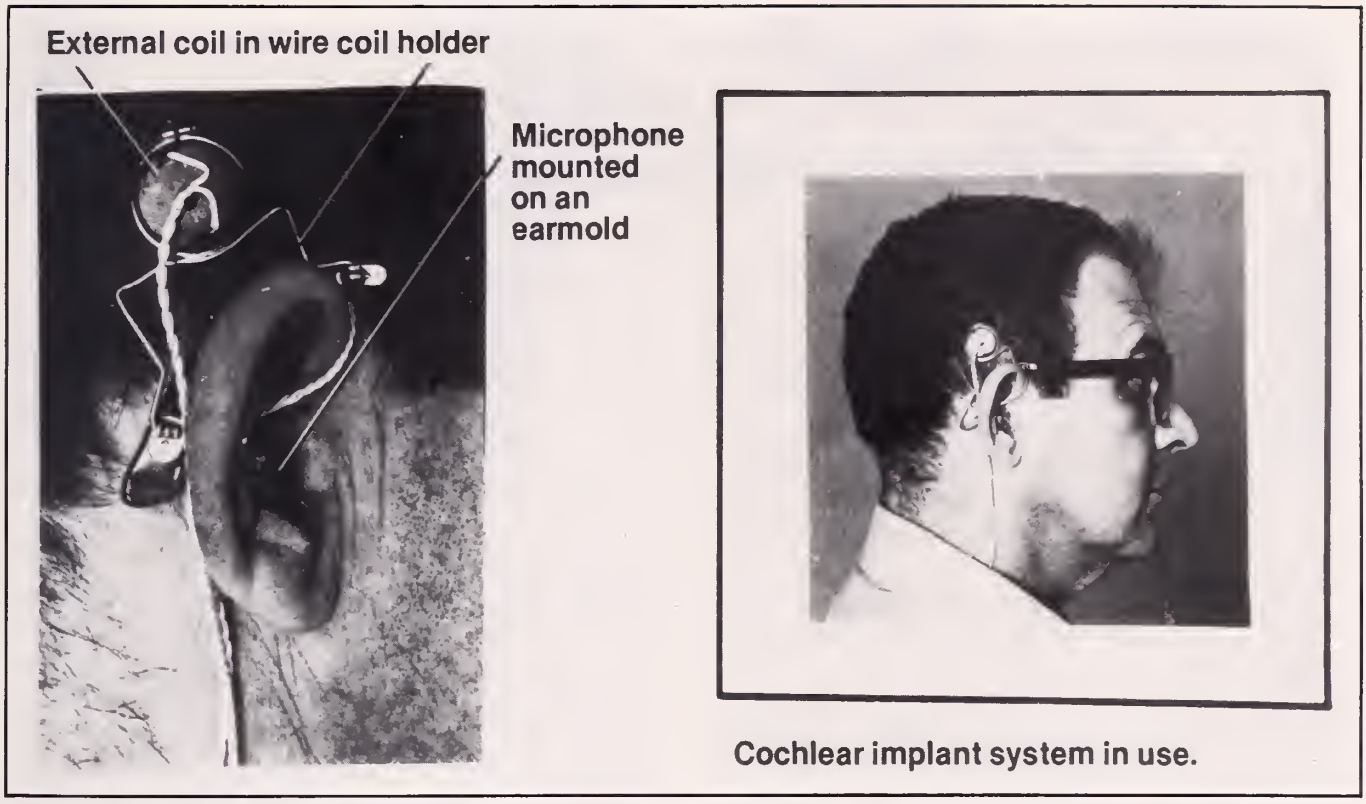


Fig. 2: The cochlear implant system in use.

Summary

Evaluation of cochlear implants in animals[5,6] and humans[1,6] have shown that implants are capable of providing aural information with few side effects. At present, cochlear implants are not capable of providing the user with speech discrimination. Side effects are uncommon although the long-term safety of the implant is unknown. Other than risks of surgery (anesthesia, infection) side effects are mainly theoretical. Among these are the possibility of further damage to neural tissues by several mechanisms (mechanical, chemical, thermal and electrolytic), but design of the implant minimizes these possibilities. Even so, implants are used only in patients judged to have irreversible, total hearing loss. The most important problem at present is that of mechanical and electronic failure of the devices, both of which have affected the two patients reported here. Implant technology is being continually improved to minimize these technical problems and to work towards the point of providing speech discrimination for the totally deaf.

TABLE I

SUMMARY OF THE STATUS OF THE COCHLEAR IMPLANT TRIALS

Single-Electrode Cochlear Implant Patients

September 10, 1981

	Late Loss	Early Loss	Total
Users	111	25	136
Non-users	11	4	15
In Process	20	5	25
Device Failure	8	1	9
Deceased	5	0	5
	155	35	190

References **1.** House WF: Cochlear Implants. *Ann Otol Rhinol Laryngol* 85: Supplement 27, 1976. **2.** Fragale D (Ed): "The Sound is Beautiful." Newsletter published by House Ear Institute, Los Angeles, California. September, 1981. **3.** House WF and Brackmann DE: Electrical Promontory Testing in Differential Diagnosis of Sensori-Neural Hearing Impairment. *Laryngoscope* 84:2163-2171, 1974. **4.** Kinney SE: Current Status of an Implantable Cochlear Prosthesis. Artificial Organs 3:379-382, 1979. **5.** Pfingst BE, Donaldson JA, Miller FM and Spelman FA: Psychophysical Evaluation of Cochlear Prostheses in a Monkey Model. *Ann Otol* 88:613-625, 1979. **6.** Fourcin AJ, Rosen SM, Moore BCJ, Douek EE, Clarke GP, Dodson H, and Bannister LH: External Electrical Stimulation of the Cochlea: Clinical, Psychophysical, Speech-Perceptual and Histological Findings. *Br J Audio* 13:85-107, 1979.

Malignant Histiocytosis

Case Report and Review

M. ERNEST MARSHALL, M.S., M.D.

HISTIOCYTIC medullary reticulosis (HMR) is a clinicopathologic entity first described by Scott and Robb-Smith[1] in 1939. In 1973, Byrne and Rappaport[2] offered a purely pathologic description of this disease under the label of malignant histiocytosis (MH). Since its original description in 1939 more than 300 cases have been reported in the English literature under the title of HMR or MH.

Malignant histiocytosis is a rare disease with protean manifestations. It is characterized by infiltration of lymph nodes, bone marrow, liver, spleen, skin and other tissues by atypical histiocytes that characteristically display erythrophagocytosis, leukophagocytosis, thrombophagocytosis and/or phagocytosis of cellular debris. MH is highly malignant and usually fatal with death resulting from infection, bleeding and/or organ failure due to extensive histiocytic infiltrates.

The present report describes a patient with MH and reviews the English literature to better define the features of this disease.

Case Report

A 57-year-old Caucasian male was admitted to hospital for evaluation of fever, malaise, abdominal pain and rash. Three months prior to admission he had developed general malaise, weakness and vague abdominal pain in the right upper quadrant of the abdomen. Approximately six weeks prior to admission he developed an intermittent fever to 102° which was unresponsive to antibiotics given empirically by his physician. Subsequently he underwent cholecystectomy for suspected cholecystitis. A lymph node removed at laparotomy was interpreted histologically as "reactive hyperplasia." Post-operatively his fever persisted and his general status continued to decline. Approximately two weeks prior to admission he developed a maculopapular erythematous-based, non-pruritic rash that began over the right lower quadrant of the abdomen and progressed to involve the chest, back, forehead and scalp (Figure 1).

Physical examination on admission revealed the rash hepatosplenomegaly, ascites and bilateral pitting ankle and pretibial edema. There was no palpable lymphadenopathy. Leukocyte count was 5,200/mm³ with a normal differential count. Hemoglobin was 10.7 gm., hematocrit 29.5%, and platelet count 133,000/mm³. Serum chemistries and enzymes were remarkable for elevations of LDH, SGOT, SGPT, total bilirubin and alkaline phosphatase. Serum lysozyme was 23.6 U/1 (normal 7-15 U/1). Chest radiograph was remarkable only for mild cardiomegaly. Computerized tomographic scan of the abdomen was normal except for the demonstration of hepatosplenomegaly.

During hospitalization he continued to have spiking fevers from 101-102° for which no infectious etiology was found.

Skin biopsy from the involved area of the abdomen revealed an abnormal cellular infiltration primarily involving the superficial dermis. The infiltrate contained large, atypical histiomonocytic cells with abundant eosinophilic cytoplasm and eccentric indented or lobulated nuclei. Occasional mitotic figures were seen. The histologic picture suggested an abnormal histiocytic process infiltrating the skin.

Bone marrow aspirate and biopsy revealed a normocellular marrow with an M:E ratio of 1:1 and erythroid hyperplasia. The marrow was infiltrated by numerous large atypical histiocytes. A few of the histiocytes displayed erythrophagocytosis, leukophagocytosis or thrombophagocytosis (Figure 2). The bone marrow and skin findings suggested the diagnosis of malignant histiocytosis. The lymph node previously re-

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Fig. 1: Gross appearance of cutaneous involvement by MH.

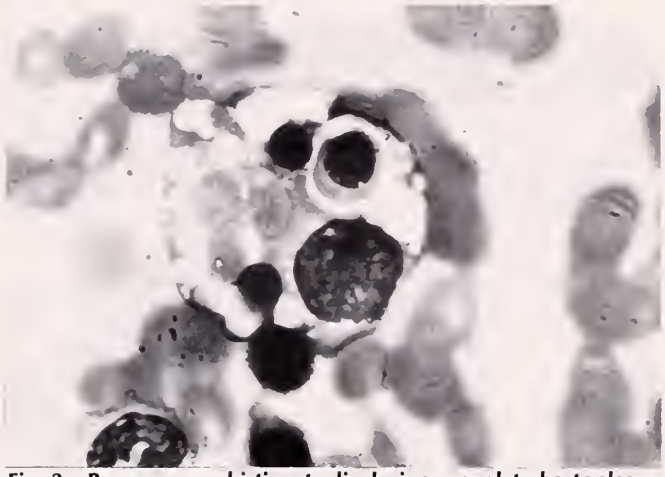


Fig. 2a: Bone marrow histiocyte displaying vacuolated cytoplasm and phagocytosis of mature erythrocytes and nucleated red cell precursors.

moved at laparotomy was reviewed retrospectively and similar atypical histiocytes were found infiltrating the medullary sinuses in a fashion diagnostic of malignant histiocytosis.

Subsequently the patient was treated with cyclophosphamide, adriamycin, vincristine sulfate and prednisone (CHOP). He promptly defervesced on chemotherapy and within one week his hepatosplenomegaly and ascites resolved completely. Within three weeks from the first cycle of CHOP the rash had resolved. He received CHOP every three weeks and experienced continued improvement in symptoms and functional status. He withdrew from chemotherapy after seven months (nine cycles) of therapy and thereafter experienced a rapid decline in status. He expired nearly eight months from the time of diagnosis. His final hospital admission was marked by disseminated Herpes zoster, *Staphylococcus aureus* sepsis and upper gastrointestinal hemorrhage. Post-mortem examination revealed evidence of bleeding from marked gastritis and duodenitis but no evidence of active MH was found in any tissue examined.

Discussion

Since Scott and Robb-Smith's original description in 1939[1] there have been over 300 cases of malignant histiocytosis (MH) (histiocytic medullary reticulosis) reported in the English literature[1-91]. While this disease is now well-recognized and pathologically well-characterized the clinical aspects of the disease, especially responsiveness to therapy, remain incompletely defined.

Three hundred seven cases were reviewed from the literature. The age at diagnosis ranged from two months to 90 years with a mean age of 35 years. There is a greater incidence among men with a male:female ratio of 2.2:1.

Presenting symptomatology was evaluated in 230 patients. The most frequent symptom was fever, occurring in 70% of the patients. Other presenting symptoms included adenopathy (25%), weakness (23%), malaise (30%), weight loss (17%), sweats (13%) and chills (8%). The duration of symptoms from onset to presentation to a physician was evaluative in 88 patients and ranged from three days to four years with a mean of six months.

Physical examination at the time of presentation was evaluative in 219 patients from the literature. Only one patient (0.5%) had a normal examination. The most frequent physical findings were adenopathy (60%), splenomegaly (58%), hepatomegaly (52%) and fever (51%). The patient in the present report had a rash as part of his initial physical findings. In a previous report[36] this author presented a review of the cutaneous involvement in MH. As reported, 13% of the patients within the literature had skin involvement. Skin lesions were part of the initial symptoms in 7% of all patients with MH. Of the patients with eventual skin involvement, the skin was involved at presentation in 52%.

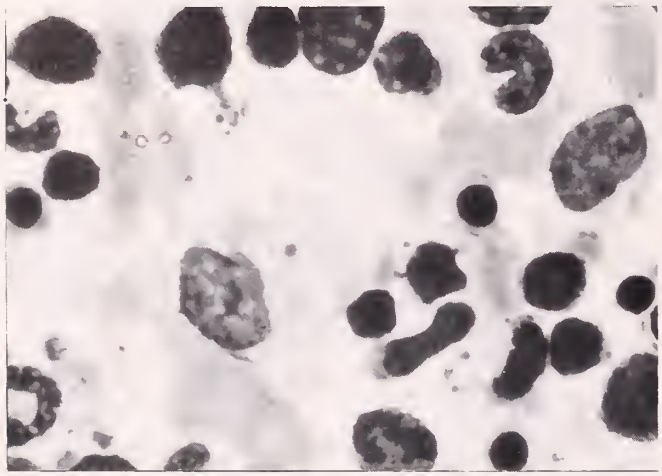


Fig. 2b: Bone marrow histiocyte displaying phagocytosis of mature erythrocyte and platelet aggregates.

Cutaneous involvement by MH presents a variable picture with regard to distribution of lesions and gross appearance. While skin lesions have been described on the face, scalp, chest, back and abdomen they tend to occur slightly more frequently on the extremities, especially on the lower legs.[3, 13, 15, 22, 30, 36, 41, 45, 55, 60, 71] The cutaneous lesions may begin as an erythematous maculopapular eruption that evolves to form scaling or crusting purple macules, papules, or plaques,[13, 16, 22, 28, 30, 39, 45, 55, 60, 69] or they may begin as cutaneous or subcutaneous nodules that subsequently undergo necrosis and ulceration.[16, 41, 69] Both patterns may be seen simultaneously in a given patient.[36]

Biopsy of skin lesions can be a valuable diagnostic procedure in patients suspected of having MH. The following dermatopathologic features of MH in the skin were described by Ho and Todd[22]: (1) a deep dermal and subcutaneous infiltrate that is often perivascular and periappendageal; (2) inflammatory cell infiltrates, including histiocytes, similar to those seen in lymph nodes; and (3) subcutaneous fat necrosis, which may or may not be present but may be extensive. Features that tend to exclude the diagnosis include the situation of the neoplastic infiltrate at the dermal-epidermal junction and the presence of cohesive masses of tumor cells.

Histologically, the epidermis is not primarily involved.[2, 13, 22, 29, 30, 45, 55] Occasionally epidermal ulceration or edema may be present.[24, 52] When edema is present free histiocytes are occasionally seen.[24] The neoplastic and inflammatory infiltrates are found in the mid- and lower dermis with relative sparing of the upper dermis. Perivascular and periappendageal infiltrates are common. The infiltrate contains morphologically typical and atypical histiocytes and may contain eosinophils, lymphocytes and plasma cells. The atypical histiocytes contain one or more round or oval nuclei containing one or two nucleoli. Histiocytes possess an eosinophilic cytoplasm that is often vacuolated. Erythrophagocytosis by histiocytes may be observed in the dermis,[13, 22, 41, 43, 69] but this is not a universal feature. Mitotic figures are seen to a varying degree.

While biopsy of skin lesions may support the diagnosis of MH definitive diagnosis requires histologic examination of an involved lymph node. Byrne and Rappaport[2] elaborated six histologic criteria for the diagnosis of MH from lymph node specimens. These include: (1) proliferation of cytologically identifiable histiocytes within the subcapsular or medullary sinuses and/or within the lymphoid parenchyma; (2) cytologic atypia of histiocytes; (3) evidence of phagocytic activity by histiocytes of RBCs, WBCs, lipid material, and/or cellular debris; (4) absence of cohesive masses of histiocytes; (5) presence of plasma cells in varying numbers; and (6) absence of capsular invasion.

Atypical histiocytes in the bone marrow may display erythrophagocytosis, leukophagocytosis, thrombophagocytosis, and/or phagocytosis of cellular debris. Histiocytic infiltrates in the spleen are found primarily in the red pulp. Hepatic infiltration is either portal or parenchymal in distribution.

Within the literature the most common abnormalities in the peripheral blood were anemia (72%), thrombocytopenia (51%) and leukopenia (46%).

Survival (measured from the time of presentation to death) was evaluative in 75 patients within the literature. Survival time ranged from 20 hours to four years with a mean of 4.5 months. Survival from the onset of symptoms to death ranged from seven days to eight years with a mean of 8.7 months.

The rarity of this disease, combined with its protean manifestations, make diagnosis very dif-

ficult. Of 307 cases reviewed from the literature only 62.5% were diagnosed antemortem. These factors are also responsible for the paucity of data concerning therapy for this disease.

Interestingly, this is the first reported case whose cutaneous lesions responded completely to chemotherapy. Rilke *et al*[42] reported 18 patients with MH who were treated with polychemotherapy and/or radiation therapy. Complete remission was attained in 50% of their patients. Of importance was the observation that complete remission was achieved only when the treatment regimen included adriamycin. Lampert *et al*[29] reported seven patients treated with CHOP. In three patients, despite a complete clinical and hematologic response, abnormal mononuclear cells persisted in the bone marrow for the first eight to 10 cycles of therapy before showing a decline in such infiltration. The median survival in their series was one year. Two features were prominent among non-responders or early relapses: the extent of bone marrow infiltration was either greater than in other cases and/or there was a persistence of immature cells during therapy. The degree of phagocytosis did not correlate with response to therapy or survival. Other isolated reports of therapeutic results are found within the literature,[3, 5, 15, 22, 26, 40, 44, 45, 50, 52, 55, 61, 67, 70] but no uniform treatment regimen has emerged and therapy remains generally unsatisfactory. Death results from the combination of systemic disease, bleeding and/or infection. At post-mortem examination virtually any body tissue can be found to be involved by MH.

Successful therapy depends upon early diagnosis and the development of more intensive chemotherapeutic regimens. Because of the rarity of this disease and its protean manifestations, early diagnosis requires a high "index of suspicion" in the proper clinical setting.

References **1.** Scott RB, Robb-Smith AHT: Histiocytic medullary reticulosis. *Lancet* 1:194-198 (1939). **2.** Byrne GE, Rappaport H: Malignant histiocytosis. GANN Monograph on Cancer Research 15:145-162 (1973). **3.** Alexander M, Daniels JR: Chemotherapy of malignant histiocytosis in adults. *Cancer* 39:1011-1017 (1977). **4.** Bjornsson S, Sperry H, Barcos MP, Satchidanand Y, Klein DJ, Henderson ES, Preisler HD. Blindness in a patient with malignant histiocytosis. *Cancer* 39:1752-1757 (1977). **5.** Cabanillas F, Rodriguez V, Valdivieso M, Butler JJ, Burke JS: Effective combination chemotherapy of adult malignant histiocytosis (Histiocytic medullary reticulosis). *Med Pediatr Oncol* 4:29-34 (1978). **6.** Castleman B, McNeely BU (Eds.): Weekly clinicopathological exercises. *NEJM* 282:917-925 (1970). **7.** Catovsky D, Bergier N, Lampert I: Malignant histiocytosis: A report of ten cases. *Br J Haematol* 33:615 (1976). **8.** Chen TK, Nesbit ME, McKenna R, Kersey JH: Histiocytic medullary reticulosis in acute lymphoblastic leukemia of T cell origin. *Am J Dis Child* 130:1262-1264 (1976). **9.** Clarke PD, Edwards CW, Amos RS, Geddes AM: Histiocytic medullary reticulosis with hypogammaglobulinemia and disseminated intravascular coagulation. *Postgrad Med J* 53:49-50 (1977). **10.** Crow J, Gumpel JM: Histiocytic medullary reticulosis presenting as rheumatoid arthritis. *Proc Roy Soc Med* 70:632-634 (1977). **11.** Duffy TP: Clinico-pathological conference. *Johns Hopkins Med J* 138:25-29 (1976). **12.** Duffy TP, Knights EB, Eggleston JC: Elevated muramidase levels in histiocytic medullary reticulosis. *NEJM* 194:167-168 (1976). **13.** Engstrom PF, Aeling JL, Suringa DWR: Histiocytic medullary reticulosis with cutaneous lesions. *Arch Derm* 106:369-371 (1972). **14.** Freedman SR. Histiocytic medullary reticulosis with central nervous system involvement. *West J Med* 125:156-159 (1976). **15.** Freeman MJ, Taylor JS, Levin HS, Dyment PG, Bergfeld WF: Histiocytic medullary reticulosis presenting as Mucha-Habermann disease. *Acta Dermatovener* (Stockholm) 58:57-64 (1978). **16.** Friedman RM, Steigbigel NH: Histiocytic medullary reticulosis. *Am J Med* 38:130-133 (1965). **17.** Gilsanz V, Harris GBC: Histiocytic medullary reticulosis in childhood. *Radiology* 126:463-465 (1978). **18.** Goldman JM, Jacobson BM, James GW: Splenectomy for histiocytic medullary reticulosis. *Postgrad Med J* 47:671-675 (1971). **19.** Greenberg E, Cohen DM, Pease GL, Kyle RA: Histiocytic medullary reticulosis. *Proc Mayo Clin* 37:271-283 (1962). **20.** Hernandez-Nieto L, Bombi JA, Caralps A, Aranalde JM: Histiocytic medullary reticulosis (Robb-Smith's disease) in renal transplant patient. *Lancet* 1:261-262 (1977). **21.** Heustis DG, Bull BS, Hadley GG: Ultrastructure of the spleen in malignant histiocytosis. *Arch Pathol Lab Med* 101:239-242 (1977). **22.** Ho FCS, Todd D: Malignant histiocytosis. Report of five Chinese patients. *Cancer* 42:2450-2460 (1978). **23.** Huhn D, Meister P: Malignant histiocytosis. Morphologic and cytochemical findings. *Cancer* 42:1341-1349 (1978). **24.** Imamura M, Sakamoto S, Hanazono H: Malignant histiocytosis: A case of generalized histiocytosis with infiltration of Langerhans' granule—containing histiocytosis. *Cancer* 28:467-475 (1971). **25.** Karcher DS, Head DR, Mullins JD: Malignant histiocytosis occurring in patients with acute lymphocytic leukemia. *Cancer* 41:1967-1973 (1978). **26.** Kingdon HS, Baron JM, Byrne GE, Rappaport H: Malignant histiocytosis: Results of combination vincristine-prednisone therapy. *Ann Int Med* 72:705-709 (1970). **27.** Klochars M, Selroos O: Elevated muramidase levels in histiocytic medullary reticulosis. *NEJM* 294:901-902 (1976). **28.** Knight AG, Jones EW: Possible histiocytic medullary reticulosis. *Proc R Soc Med* 69:233-234 (1976). **29.** Lampert IA, Catovsky D, Bergier N: Malignant

histiocytosis: A clinico-pathological study of 12 cases. *Br J Haematol* 40:65-77 (1978). **30.** Liao KT, Rosai J, Daneshbod K: Malignant histiocytosis with cutaneous involvement and eosinophilia. *Am J Clin Pathol* 57:438-448 (1972). **31.** Lutman GB, Senhauser DA: Histiocytic medullary reticulosis: Report of a case with autopsy findings. *South Med J* 59:1345-1350 (1966). **32.** Lynch EG, Alfrey CP: Histiocytic medullary reticulosis. Hemolytic anemia due to erythrophagocytosis by histiocytosis. *Ann Int Med* 63:666-671 (1965). **33.** MacGillivray JB, Duthie JS: Malignant histiocytosis (Histiocytic medullary reticulosis) with spindle cell differentiation and tumour formation. *J Clin Path* 30:120-125 (1977). **34.** Marshall AHE: Histiocytic medullary reticulosis. *J Path Bact* 71:61-71 (1956). **35.** Marshall AHE, Revell PA: Malignant histiocytosis with associated "reticulum cell sarcoma." *J Pathol* 122:9-12 (1977). **36.** Marshall ME, Farmer ER, Trump DL: Cutaneous involvement in malignant histiocytosis: Case report and review of the literature. *Arch Dermatol* 117:278-281 (1981). **37.** Mogi G, Maeda S, Yoshida T: Histiocytic medullary reticulosis with involvement of the nose. *Laryngoscope* 86:1752-1756 (1976). **38.** Musumeci R, Castellino RA: Lymphography in malignant histiocytosis: Case report. *Lymphology* 9:66-68 (1976). **39.** Natelson EA, Lynch EC, Hettig RA, Alfrey CP: Histiocytic medullary reticulosis. The role of phagocytosis in pancytopenia. *Arch Intern Med* 122:223-229 (1968). **40.** Niskanen E, Vuopio P, Saksela E, Selroos O: Malignant histiocytosis. A clinical and morphological study of four cases. *Ann Clin Res* 10:52-59 (1978). **41.** Pinol-Aguade J, Ferrando, J, Tomas JM, Mieras C, Peyri J: Necropsy and ultrastructural findings in histiocytic medullary reticulosis. *Br J Dermatol* 95:35-44 (1976). **42.** Rilke F, Carbone A, Musumeci R, Pilotti S., DeLena M, Bonadonna G: Malignant histiocytosis: A clinicopathologic study of 18 consecutive cases. Tumori 64:211-227 (1978). **43.** Robinowitz BN, Noguchi S, Bergfeld WF: Tumor cell characterization of histiocytic medullary reticulosis. *Arch Dermatol* 113:927-929 (1977). **44.** Ruuskanen O, Kero P, Rajameki A, Ekfors T, Nordman E: Case Report: Malignant histiocytosis (Histiocytic medullary reticulosis). *Acta Paediatr Scand* 66:249-254 (1977). **45.** Scully RE, Galdabini JJ, McNeely BU (Eds.). Weekly clinicopathological exercises. *NEJM* 296:676-683 (1977). **46.** Serck-Hanssen A, Purchit GP: Histiocytic medullary reticulosis: Report of 14 cases from Uganda. *Br J Cancer* 22:506-516 (1968). **47.** Shamoto M, Suchi T: Malignant histiocytosis with chronic course. Ultrastructural and cytochemical studies. *Virchows Arch A Path Anat and Histol* 376:95-105 (1977). **48.** Shreiner DP: Acute lymphoblastic leukemia terminating as histiocytic medullary reticulosis. *JAMA* 231:838-840 (1975). **49.** Skinnider LF, Ghadially FN: Ultrastructure of cell surface abnormalities in neoplastic histiocytosis. *Br J Cancer* 35:657-667 (1977). **50.** Stein RS, Moran EM, Byrne GE: Malignant histiocytosis: Complete remission with combination chemotherapy. *Cancer* 38:1083-1086 (1976). **51.** Vaithianathan T, Fishkin S, Gruhn JG: Histiocytic medullary reticulosis. *Am J Clin Pathol* 47:160-166 (1967). **52.** Warnke RA, Kim H, Dorfman RF: Malignant histiocytosis (Histiocytic medullary reticulosis). *Cancer* 35:215-230 (1975). **53.** White DR, Bannayan GA, George JN, Sears DA: Histiocytic medullary reticulosis with parallel increases in serum acid phosphatase and disease activity. *Cancer* 37:1403-1411 (1976). **54.** Scamps RA, O'Neill BJ, Purser BN: Histiocytic medullary reticulosis. *Med J Austr* 2:956-960 (1971). **55.** Henderson DW, Sage RE: Malignant histiocytosis with eosinophilia. *Cancer* 32:1421-1428 (1973). **56.** Kalderon AE: Histiocytic medullary reticulosis associated with cytomegalic inclusion disease. A case report. *Cancer* 27:659-666 (1971). **57.** Ballard JO, Binder RA, Rath CE, Powell D: Malignant histiocytosis in a patient presenting with leukocytosis, eosinophilia and lymph node granuloma. *Cancer* 35:1444-1448 (1978). **58.** McGovern VJ, Morrow AW, Thompson EF: A case of histiocytic medullary reticulosis. *J Path Bact* 63:340-343 (1951). **59.** DeVilliers DM: Histiocytic medullary reticulosis. *S Afr Med J* 43:756-758 (1969). **60.** Anderson RG: Histiocytic medullary reticulosis with transient skin lesions. *Br Med J* 1:220-221 (1944). **61.** Amsel S, Bijlsma F: Histiocytic medullary reticulosis. Clinical and pathological studies in Uganda. *Trop Geogr Med* 26:31-38 (1974). **62.** Asher R: Histiocytic medullary reticulosis. A case without lymphadenopathy. *Lancet* 1:650-651 (1946). **63.** Braun EH: Medullary reticuloses in adults. *Can Med Assoc J* 83:364-371 (1960). **64.** Yu CF, Tung CH, Huang HT, Tsao TT, Ku HL, Yu CT, Liu C: Histiocytic medullary reticulosis. *Chinese Med J* 80:466-473 (1960). **65.** Clark BS, Dawson PJ: Histiocytic medullary reticulosis presenting with a leukemic blood picture. *Am J Med* 47:314-317 (1969). **66.** Persaud V, Wood JK: Histiocytic medullary reticulosis. Report of the first case in Jamaica. *Am J Clin Path* 48:396-400 (1967). **67.** Sullivan JR, Ungar B, Hicks JD, Hurley TH: Histiocytic medullary reticulosis. *Aust NZJ Med* 5:347-355 (1975). **68.** Fowler M: Histiocytic medullary reticulosis in a child. *Arch Dis Child* 35:591-594 (1960). **69.** Abele DC, Griffin TB: Histiocytic medullary reticulosis. Report of two cases and review of the literature. *Arch Derm* 106:319-329 (1972). **70.** Hirsh J, Ungar B, King WE, Lubbe TR: Histiocytic medullary reticulosis: A case report. *Austr Ann Med* 13:269-274 (1964). **71.** Civin H, Gotshalk HC, Okazaki K: Histiocytic medullary reticulosis. Report of two cases. *Arch Intern Med* 94:375-383 (1965). **72.** Medford FE: Histiocytic medullary reticulosis. Report of a case. *Arch Intern Med* 116:589-593 (1965). **73.** Seligman BR, Rosner F, Lee SL, Kagan MD: Histiocytic medullary reticulosis. Fatal hemorrhage due to massive platelet phagocytosis. *Arch Intern Med* 129:109-113 (1972). **74.** Zawadzki ZA, Pena CE, Fisher ER: Histiocytic medullary reticulosis. Case report with electron microscopic study. *Acta Haemat* 42:50-57 (1969). **75.** Zak FG, Rubin E: Histiocytic medullary reticulosis. *Am J Med* 31:813-818 (1961). **76.** Kamegaya K, Noguchi H: Histiocytic medullary reticulosis (Reticuloendotheliosis with striking erythrophagocytosis). *Acta Path Jap* 14:231-237 (1964). **77.** Boake WC, Card WH, Kinney JF: Histiocytic medullary reticulosis. Concurrence in father and son. *Arch Intern Med* 116:245-252 (1965). **78.** Clinical deterioration and death of a patient with chronic pulmonary disease. *Am J Med* 64:477-484 (1978). **79.** Molyneux ME, Tozer RA, Hutt MSR: Histiocytic medullary reticulosis in Africa. *Lancet* 2:1202-1203 (1978). **80.** Chawla SK, Lopresti PA, Burdman D, Sileo A, Govoni AF, Smulewicz

JJ: Diffuse small bowel involvement in malignant histiocytosis. *Amer J Gastroenterol* 63:129-134 (1975). **81.** Kornblut AD, Gadek JE, Fauci AS, Wolff SM: Head and neck manifestations of histiocytic medullary reticulosis. *Laryngoscope* 88:1596-1602 (1978). **82.** Gupta OM, Suri JS, Sood SK: Histiocytic medullary reticulosis: A report of four cases from India. *Trop Geogr Med* 28:31-36 (1976). **83.** Vosika GJ, Krivit W, Gerrard JM, Coccia PF, Nesbit ME, Coalson JJ, Kennedy BJ: Oncornavirus-like particles from cultured bone marrow cells preceding leukemia and malignant histiocytosis. *Proc Nat Acad Sci* 72:2804-2808 (1975). **84.** Merril RH, O'Neill B: Positive mono-spot test in HMR. *Am J Clin Path* 65:407-411 (1976). **84.** Merril RH, O'Neill B: Positive mono-spot test in HMR. *Am J Clin Path* 65:407-411 (1976). **85.** Hutt MSR, Lowenthal MN, Fine J, Jones IG, Nag J, O'Riordan EC: Histiocytic medullary reticulosis (Malignant Histiocytosis) in Zambia. *J Trop Med Hyg* 78:239-242 (1975). **86.** Rosenstock HA, Sandor IM, Hoenecke H: Acute histiocytic medullary reticulosis in a pubescent girl. *Tex Med* 65:56-59 (1969). **87.** Serck-Hanssen A: Histiocytic medullary reticulosis. Recent Results Cancer Res 41:292-297 (1973). **88.** Olsen T: Histiocytic medullary reticulosis. A postmortem finding in a patient with erythroleukemia and skin carcinomata. *Med J Aust* 1:242-246 (1973). **89.** Vardiman JW, Byrne GE, Rappaport H: Malignant histiocytosis with massive splenomegaly in asymptomatic patients. A possible chronic form of the disease. *Cancer* 36:419-427 (1975). **90.** Lenes BA, Sacher RA, Jacobson RJ, Rath CE: Malignant histiocytosis. *Br J Haematol* 41:291 (1979). **91.** Mngola EN, Kasili EG: Histiocytic medullary reticulosis: A case report from the Kenyatta Natioinal Hospital. *East Afr Med J* 48:662-666 (1971).

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Toxicology Screening by Gas Chromatography-Mass Spectrometry Three Years Experience

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The results of toxicology screening of body fluids (blood, urine, gastric aspirate) by gas chromatography-mass spectrometry in cases of suspected drug intoxication were analyzed for the period January 1979 through December 1981. Of 3,569 screens, about one-half were positive for at least one foreign substance; in about one-third of the positive screens, multiple substances were detected. Certain frequently abused drugs, such as ethanol, aspirin and narcotic analgesics, that are usually detected by other methods, were excluded from the analysis. The most frequently detected drugs were diazepam, phenobarbital, phenytoin, amitriptyline, and methaqualone. Over the three-year period the frequency of methaqualone and chlorpromazine detection progressively increased whereas phenobarbital and amitriptyline detection decreased. A review of the charts for 100 consecutive positive screens revealed no sexual difference in the frequency or spectrum of drugs detected, an unexplained nine-fold predominance of whites, and a low concordance between the drug suspected from the medical history and that detected. The principal indication for obtaining the screen was an altered mental state and history of possible drug ingestion.

One of the problems frequently confronting emergency room physicians is that of patients presenting with an altered mental state and a history of ingesting an unknown substance. Identification and quantification of the intoxicant is of the utmost importance in permitting the physician to predict potential complications and avert or blunt their effects. In some cases the physical signs and symptoms allow an educated guess as to the class of the intoxicant[1] and correlation with the history may allow precise identification. All too often, however, the patient presents in a stupor or coma without other specific physical signs or corroborative historical information. In these instances toxicological screening may be invaluable by making rapid, positive identification of the ingested substance(s).

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The Therapeutics and Toxicology Laboratory of the Department of Pharmacology and Toxicology, University of Louisville, provides 24-hour toxicology screening for hospitals located in the Louisville, Kentucky metropolitan area. This service utilizes a gas chromatograph interfaced with a mass spectrometer (GC-MS).

The purpose of this retrospective study was two-fold. First was to determine the spectrum and frequency of ingestions over a three-year period in this metropolitan area. Second was a detailed analysis of 100 consecutive positive toxicology screens to determine the characteristics of patients requiring this service and the indications prompting emergency medicine physicians to utilize the service.

Materials and Methods

Survey of toxicology results: All toxicological screening reports from January 1979 through December 1981 were reviewed to determine the specific agent(s) detected. Patients with multiple simultaneous samples (blood, urine and

Table 1. Frequency of positive toxicology screens in three-year study period.

	1979	1980	1980 Sample Population[a]	1981
No. Toxicology Screens	776	1456	100	1337
No. Positive Screens	379	656	100	559
% Positive Screens	49	45	100	42
No. Positive for Multiple Drugs	112	177	29	182
% Positive Screens Containing Multiple Drugs	30	27	29	33

[a] Results obtained from analysis of 100 consecutive positive toxicology screens for mid-1980.

gastric aspirate) were considered as a single report. Cases excluded were those in which only caffeine, nicotine and lidocaine were detected. Also excluded were acetaminophen, digitalis, salicylate, ethanol, and lithium intoxications due to separate, in-hospital, analytical methods utilized to detect these substances. Likewise, narcotic substance intoxications were not included due to the frequent emergency room diagnosis and treatment using narcotic antagonists, precluding the necessity for toxicology screening.

Chart review: One hundred consecutive positive screens from mid-1980 were extensively reviewed. Data gleaned from these charts included age, sex, and race of subjects, the history given to emergency room personnel, the presenting signs and symptoms, the reason for obtaining toxicological screening, the mode of therapy utilized and the emergency room disposition of the patient. Ninety-two of the cases were from the major teaching hospital of the University.

GC-MS procedure: Screening was carried out utilizing a Hewlett-Packard Model 5992 gas chromatograph-mass spectrometer equipped with disc data storage. The chromatographic column was a glass 6 ft × 2 mm, 3% SP2100 (methylsilicone polymer) on Supelcoport; the oven temperature was advanced from 120°C to 260°C at 16°C per minute. The column effluent was passed directly into the mass spectrometer where the substance specific electron impact mass spectrum was obtained.

Samples were prepared by buffering to acidic or basic conditions depending on the pKa of the suspected agent. Samples containing unknown materials were adjusted to pH 9. Buffered samples were then extracted with a 90:10 V/V methylene chloride/isopropanol mixture. Following phase separation, the organic phase, was concentrated by evaporation and an aliquot injected into the GC-MS for analysis. The mass spectra obtained were compared by computer with an in-house disc-based library consisting of 400 compounds. Spectra yielding a significant correlation with library data were then examined visually by a trained analyst and column retention times were compared to standard retention times. When spectra were obtained which did not correlate with spectra in this system library, the Environmental Protection Agency/National Institute of Health Mass Spectral Data Base consisting of spectra obtained from over 30,000 compounds[2] was accessed via telephone for a similar comparison. Drugs and/or metabolites identified by this latter procedure were verified and included in the disc library. The Therapeutics and Toxicology Laboratory participates in both the Therapeutic Drug Monitoring and Advanced Toxicology quality assurance surveys of the College of American Pathologists.

Results

Data on the frequency of positive toxicology screens over the three-year study period is summarized in Table 1. Approximately one-half of the screens each year were "positive" in that at least one foreign substance was detected. Of the positive screens, multiple substances were detected in nearly one-third.

The spectrum, relative frequency of detection, and sexual distribution of substances detected for each of the three years and in the 1980 population sample are shown in Table 2. Sedative-hypnotics were by far the most commonly detected substances, accounting for 50-76% of all

Table 2. Substances detected by toxicology screening in three-year study period.

Substance Detected	1979 Female (No.)	1979 Male (No.)	1979 Total (%)[a]	1980 Female (No.)	1980 Male (No.)	1980 Total (%)[a]	1980 Sample Population (%)[a]	1981 Female (No.)	1981 Male (No.)	1981 Total (%)[a]
Sedative-Hypnotics			(75.5)			(68.5)	(96)			(49.6)
Barbiturates:			38.8			23.3	22			13.4
Amobarbital	6	4	2.6	5	2	1.1	2	1	1	0.4
Butabarbital	7	4	2.9	10	3	2.0	4	3	2	0.9
Mephobarbital	8	14	5.8	3	1	0.6	1	1	1	0.4
Pentabarbital	6	2	2.1	3	6	1.4	1	2	3	0.9
Phenobarbital	39	41	21.1	54	49	15.7	12	31	22	9.5
Secobarbital	7	4	2.9	8	6	2.1	2	3	3	1.1
Other	2	2	0.8	4	1	0.5	0	2	0	0.4
Benzodiazepines:			25.3			31.0	40			20.0
Chlordiazepoxide	10	12	5.8	19	21	6.1	9	12	12	4.3
Diazepam	35	30	17.2	85	75	24.4	31	42	43	15.2
Flurazepam	5	4	2.4	2	1	0.5	0	2	0	0.4
Oxazepam	0	0	0	0	0	0	0	0	1	0.2
Chloral hydrate	1	4	1.3	0	0	0	0	5	1	1.1
Ethchlorvynol	3	1	1.1	3	1	0.6	2	9	4	2.3
Glutethimide	1	0	0.3	1	2	0.5	1	1	2	0.5
Meprobamate	10	2	3.2	13	8	3.2	8	7	1	1.4
Methaqualone	12	10	5.8	38	25	9.6	23	32	26	10.4
Methyprylon	1	0	0.3	1	1	0.3	0	1	1	0.4
Tricyclic Antidepressants			(17.4)			(16.0)	(25)			(14.7)
Amitriptyline	29	17	12.1	31	41	11.0	15	23	19	9.1
Desipramine	0	0	0	3	0	0.5	0	4	0	0.7
Doxepin	6	6	3.2	12	5	2.6	7	11	10	3.8
Imipramine	4	3	1.9	6	4	1.5	1	5	6	2.0
Nortriptyline	1	0	0.3	2	1	0.5	2	4	0	0.7
Anticonvulsants			(10.8)			(14.3)	(6)			(13.4)
Carbamazepine	0	0	0	2	0	0.3	0	4	0	0.7
Phensuximide	1	0	0.3	1	1	0.3	1	0	0	0
Phenytoin	15	22	9.8	39	41	12.2	5	34	30	11.4
Primidone	2	1	0.8	6	4	1.5	0	3	2	0.9
Valproic acid	0	0	0	0	0	0	0	1	1	0.4
Phenothiazines			(6.3)			(6.6)	(3)			(13.8)
Chlorpromazine	6	15	5.0	15	20	5.3	3	23	32	9.8
Chlorprothixene	0	0	0	2	0	0.3	0	0	0	0
Hydroxyzine	0	2	0.5	0	0	0	0	0	0	0
Promethazine	2	1	0.8	1	1	0.3	0	8	6	2.5
Thioridazine	0	0	0	2	0	0.3	0	5	2	1.3
Trifluoperazine	0	0	0	2	0	0.3	0	0	1	0.2
Antihistamines			(6.3)			(5.8)	(1)			(11.8)
Brompheniramine	0	1	0.3	5	1	0.9	0	0	1	0.2
Chlorpheniramine	0	1	0.3	1	0	0.2	0	6	1	1.1
Cyclizine	0	0	0	0	0	0	0	1	0	0.2
Diphenhydramine	6	11	4.5	21	8	4.4	1	28	19	8.4
Doxylamine	2	0	0.5	2	0	0.3	0	1	1	0.4
Methapyriline	1	2	0.8	0	0	0	0	0	0	0
Pheniramine	0	0	0	0	0	0	0	3	1	0.7
Tripelennamine	0	0	0	0	0	0	0	4	2	1.1
Sympathomimetics			(0.5)			(1.4)	(0)			(11.6)
Amphetamine	0	0	0	0	0	0	0	1	0	0.2
Ephedrines[b]	0	1	0.3	0	0	0	0	17	15	5.7
Methamphetamine	0	0	0	0	1	0.2	0	2	3	0.9
Norephedrine	0	0	0	3	2	0.8	0	4	8	2.1
Phenmetrazine	0	0	0	0	0	0	0	2	4	1.1
Phentermine	0	1	0.3	0	0	0	0	0	0	0
Phenylpropanolamine	0	0	0	1	1	0.3	0	7	2	1.6
Miscellaneous			(5.3)[c]			(4.4)[d]	(3)[e]			(13.1)[f]

[a]% of positive screens.
[b]includes ephedrine, racephedrine and pseudoephedrine.
[c]Drug (no. females, no. males): carisprodol (1, 0), chlorzoxazone (2, 1), diphenoxylate (0, 1), fenprofen (1, 0), phencyclidine (0, 1), phenylbutazone (2, 1), procaine (1, 0), quinidine (0, 1), theophylline (0, 4), toluene (2, 2).
[d]*p*-aminobenzoic acid (2, 1), atropine (1, 0), carisprodol (1, 0), cocaine (1, 2), phencyclidine (0, 1), phenylbutazone (2, 3), propranolol (2, 0), quinidine (3, 2), theophylline (3, 1), toluene (2, 2).
[e]phencyclidine (0, 1), phenylbutazone (0, 1), toluene (0, 1).
[f]antipyrine (1, 0), benztropine (1, 0), chlorzoxazone (1, 0), cresol (2, 0), dichlorocyclohexane (0, 1), fluphenazine (0,1), haloperidol (2, 2), hyoscine (1, 0), isoniazid (2, 1), isopropanol (0, 1), ketamine (0, 1), loxapine (1, 0), methanol (0, 1), phenylbutazone (2, 3), procyclidine (1, 1), quinidine (1, 1), theobromine (13, 14), theophylline (6, 4), thiothixene (0,1), trimethoprim (3, 4).

positive screens. Following in order of decreasing frequency were tricyclic antidepressants (15-17% of positives), anticonvulsants (11-14%), phenothiazines (6-14%), antihistamines (6-12%) and sympathomimetics (1-12%). Among the sedative-hypnotics, barbiturates and benzodiazepines were most commonly detected, together accounting for 33-64% of the positive screens. Phenobarbital was the barbiturate and diazepam the benzodiazepine most frequently detected. In each of the other major drug groups, single agents accounted for more than one-half of all entries for that group. The leading drugs in these groups were: tricyclic antidepressants, amitriptyline; anticonvulsants, phenytoin; phenothiazines, chlorpromazine; and, antihistamines, diphenhydramine. Thus, although more than 75 different substances were identified during the three-year period, a total of five (phenobarbital, diazepam, methaqualone, amitriptyline and phenytoin) accounted for 56-73% of all positive screens. Overall, there were no major sex differences in the total number of positive toxicology screens, the spectrum of substances detected or the frequencies of detection.

Over the three-year period there were progressive changes in the frequency of detection of certain classes of drug, which included decreases in sedative-hypnotic and tricyclic antidepressants, and increases in phenothiazine and sympathomimetic detection. Of the individual drugs comprising more than 5% of the total sample, there was a progressive increase in the frequency of detection of methaqualone and chlorpromazine, and a progressive decrease in the frequency of detection of phenobarbital and amitriptyline.

In general, the spectrum and frequency distribution of substances included in the 1980 population sample paralleled that for the entire year, indicating that the sample accurately reflected the total population. Data on the final emergency room diagnosis (excluding psychiatric diagnosis) and disposition of the 100 consecutive patients comprising the 1980 sample is shown in Table 3. For purposes of the study, patients were assigned to one of three diagnostic categories based on the contribution of the detected substance(s) to their acute medical problem. In 90%, ingestion of the substance identified was the only nonpsychiatric diagnosis; in 6% the drug was believed to be a contributing factor to the patient's major problem (e.g., methaqualone detected in a patient with minor head trauma); and in 4% was considered an incidental finding, not apparently contributing to the patient's acute problem (e.g., trace amount of chlordiazepoxide detected in a patient admitted because of pneumonia and dehydration). Two-thirds of the patients were admitted to the hospital. Of these, 43 (63% of those admitted) were admitted to the medical service and 18 (27% of those admitted) to the psychiatry service. The only death in the group occurred several days after admission and was attributed to injuries sustained in a motor vehicle accident. The drug detected (methaqualone) may have contributed to the accident but was not felt to be an immediate cause of death.

The clinical characteristics of the 100 cases are summarized in Table 4. As in the overall population, there was an equal sexual distribution (53% female, 47% male), and no major sexual difference in substances detected. The mean ages of the females (30 ± 1.8 yr, X ± SE) and males (28 ± 4.7 yr) were also similar. There was a major racial difference in the frequency of positive screens; only 9.6% of the patients were black.

The indication for ordering the toxicology screen in the vast majority of cases was a history

Table 3. Diagnosis and emergency room disposition of 100 consecutive patients with positive toxicology screens.

	No.
Diagnosis:	
Drug intoxication only acute problem identified	90
Drug intoxication *and* other acute problem[a], both contributing to patient's illness	6
Drug detected was incidental to other acute problem[b] and not contributory to patient's illness	4
Disposition:	
Discharged from emergency room	32
Admitted to hosptial	68
Admitting department:	
Medicine	43
Psychiatry	18
Surgery	5
Pediatrics	1
Obstetrics-Gynecology	1

[a] all cases involved head trauma
[b] one case each of head trauma, heat stroke, pneumonia and seizure disorder

of possible drug ingestion and an altered mental state which included 1) impaired consciousness (sleepiness, confusion, stupor, coma), 2) delirium and acute confusional states, and 3) convulsions. Other findings on examination that might suggest chemical intoxication were recorded on the emergency room record in less than 15% of the cases. In no case was a physical sign, other than altered mental state, the sole indication for ordering the toxicology screen.

Overall, there was concurrence between the substance suggested by history and that detected in slightly less than one-half of the cases (46.4%), although there was some variability depending on the drug type. For barbiturates, tricyclic antidepressants and anticonvulsants, there was agreement in 63-67% of cases whereas for benzodiazepines and most other sedative-hypnotics agreement was less than 40%. The drugs detected had been prescribed for the patient in a minority of cases.

Discussion

This analysis reconfirms and extends many earlier findings on acute drug intoxications[3, 5-9] and provides some new insights into the characteristics of intoxicated patients and the clinical utilization of the toxicology laboratory.

Drug intoxication as a cause of altered mental state. Approximately one-half of the toxicology screens were positive for one or more foreign substances and in 90% of these cases drug intoxication was the only acute nonpsychiatric problem identified. Since the principal indication for ordering the toxicology screen was an altered mental state and history of possible drug ingestion, it would appear that drug intoxication may be responsible for about one-half of patients presenting with such findings. Drug intoxication may have actually accounted for a higher proportion of patients with these findings since some drugs such as ethanol and narcotic analgesics, which are commonly involved in self-poisonings, were excluded from this analysis. Although patients in this study varied widely in the severity of mental function impairment, the conclusion that about one-half or more of the cases were due to drug intoxication is in general agreement with the report of Helliwell *et al*[3] that about one-half of the coma cases in which the cause was not readily identified by history, physical examination or simple metabolic laboratory tests, were secondary to drug intoxication. These results, together with the unrealiability of the drug history,[8] thus document the importance of the toxicology screen in establishing a precise diagnosis in patients with an altered mental state.

Spectrum and frequency distribution of intoxicating substances. More than 75 different substances were detected over the three-year period but a total of only five (phenobarbital, diazepam, methaqualone, amitriptyline and phenytoin) accounted for two-thirds of all positive screens. This finding is in close agreement with recent reports that benzodiazepines, barbiturates, other sedative-hypnotics, tricyclic an-

Table 4. Clinical characteristics of 100 cases with positive toxicology screens.

Substance Detected	Sex	No.	Mean Age (Range) (yrs)	Race B	Race W	Indication for Toxicology Screen: Hx[a]	AMS[b]	OPS[c]	Detected = History (%)	Prescribed Drug (%)
Sedative-Hypnotics										
Barbiturates:										
Amo-/Secobarbital	F	2	25 (18-32)	0	2	2	2	0	0	0
	M	2	26 (20-32)	0	2	2	2	0	100	0
Butabarbital	F	3	33 (32-36)	0	3	3	2	1	67	33
	M	1	19	0	1	1	1	0	100	100
Mephobarbital	F	1	27	0	1	0	1	1	0	0
Pentabarbital	F	1	17	0	1	1	1	0	100	0
Phenobarbital	F	8	29 (16-46)	1	7	8	7	1	63	50
	M	4	20 (17-26)	1	3	4	4	0	75	75
Benzodiazepines:										
Chlordiazepoxide	F	5	40 (24-58)	0	5	5	5	0	40	20
	M	4	36 (18-63)	0	4	1	4	0	25	0
Diazepam	F	18	35 (15-68)	2	16	15	15	3	50	39
	M	13	31 (17-58)	0	13	10	11	1	38	15
Ethchlorvynol	F	1	38	0	1	1	1	0	100	0
	M	1	25	0	1	1	1	0	100	0
Glutethimide	M	1	28	0	1	1	1	0	0	0
Meprobamate	F	4	23 (15-29)	0	4	3	4	0	25	0
	M	4	23 (19-28)	0	4	3	3	1	50	75
Methaqualone	F	7	25 (19-32)	1	6	6	6	0	29	0
	M	16	23 (2-47)	0	16	12	16	0	25	0
Tricyclic Antidepressants										
Amitriptyline	F	10	39 (25-68)	2	8	10	10	2	80	80
	M	5	33 (17-68)	1	4	4	5	1	60	40
Doxepin	F	5	30 (29-33)	0	5	5	4	1	60	40
	M	2	29 (25-33)	0	2	2	2	0	100	100
Imipramine	F	1	1	0	1	1	1	1	0	0
Nortriptyline	F	2	35 (34-35)	0	2	2	2	0	100	100
Anticonvulsants										
Phensuximide	M	1	28	0	1	1	1	0	0	0
Phenytoin	F	2	29 (16-42)	0	2	1	2	1	100	50
	M	3	21 (18-26)	1	2	3	3	0	67	100
Miscellaneous										
Chlorpromazine	F	1	33	0	1	1	1	1	100	100
	M	2	29 (25-32)	1	1	2	1	0	0	50
Diphenhydramine	M	1	25	0	1	1	1	0	0	0
Phencyclidine	M	1	22	0	1	1	0	0	0	0
Phenylbutazone	M	1	25	0	1	1	1	0	0	0

[a]History of possible drug ingestion.
[b]Altered mental state including 1) impaired consciousness, 2) delirium and acute confusional states, and 3) convulsions.
[c]Other physical signs.

tidepressants and anticonvulsants are among the drugs most commonly involved in overdose cases.[5-7,9] It is interesting that the drugs detected in our patients with a wide spectrum of severity of mental function impairment closely parallel those detected in other studies of patients with coma due to drug overdose.[2] The present results also demonstrate the dynamic nature of drug abuse patterns. For example, there was a downward trend in the frequency of phenobarbital and amitriptyline detection and an upward trend in methaqualone and chlorpromazine detection. Similar observations have been reported by others.[5,8] It should be emphasized that the pattern of intoxicants reported here does not reflect the total pattern of drug abuse in the community since, as noted above, some frequently abused drugs were excluded from the analysis and others undoubtedly cause alterations in mental state severe enough to lead to emergency room admission much less frequently than the drugs reported here. The results do, however, reflect the pattern of substances likely to be encountered in patients admitted to the emergency room because of altered mental state.

Patient characteristics. Patients having positive toxicology screens tended to be less than 35 years of age (80% of patients) and white (90%); they were equally likely to be male or female. The nine-fold predominance of whites was unexpectedly large since approximately equal numbers of blacks and whites are admitted to the emergency room and wards of the hospital. The reasons for this large racial difference are unclear. To our knowledge there is no recent data on the racial makeup of drug intoxicated patients.

Utilization of the toxicology laboratory. The results indicate that emergency room physicians relied heavily on the toxicology laboratory to facilitate a precise diagnosis in patients with an altered mental state and history of possible drug ingestion. Although specific signs or symptoms may point to a probable intoxicant in some cases,[1] these did not appear to be the principal indication for obtaining the toxicology screen in any case, and indeed such signs were noted on the emergency room record in only a small minority of cases. This reliance on the laboratory emphasizes the importance of rapid and reliable analyses. The speed of analysis can be easily ascertained but reliability is difficult to evaluate. The reliability of toxicology screening by GC-MS was recently questioned in a study in which replicate samples of blood or urine from suspected overdose cases were submitted to four separate laboratories, and results differing both quanitatively and qualitatively were reported in some cases.[4] Since no clinical information was supplied to the laboratories, this finding, although worrisome, is perhaps less surprising. Reliability can be optimized by careful attention to detail. Obviously, pertinent clinical information (history, physical findings) should be supplied with the specimen. Also, the likelihood of detecting an intoxicant can be increased by submitting multiple specimens including blood, urine and gastric fluid. Further, if a suspected intoxicant is not detected initially a repeat analysis should be performed. Only by attention to these details and effective two-way communication between clinicians and laboratory personnel can the full potential value of toxicology screening by GC-MS be realized.

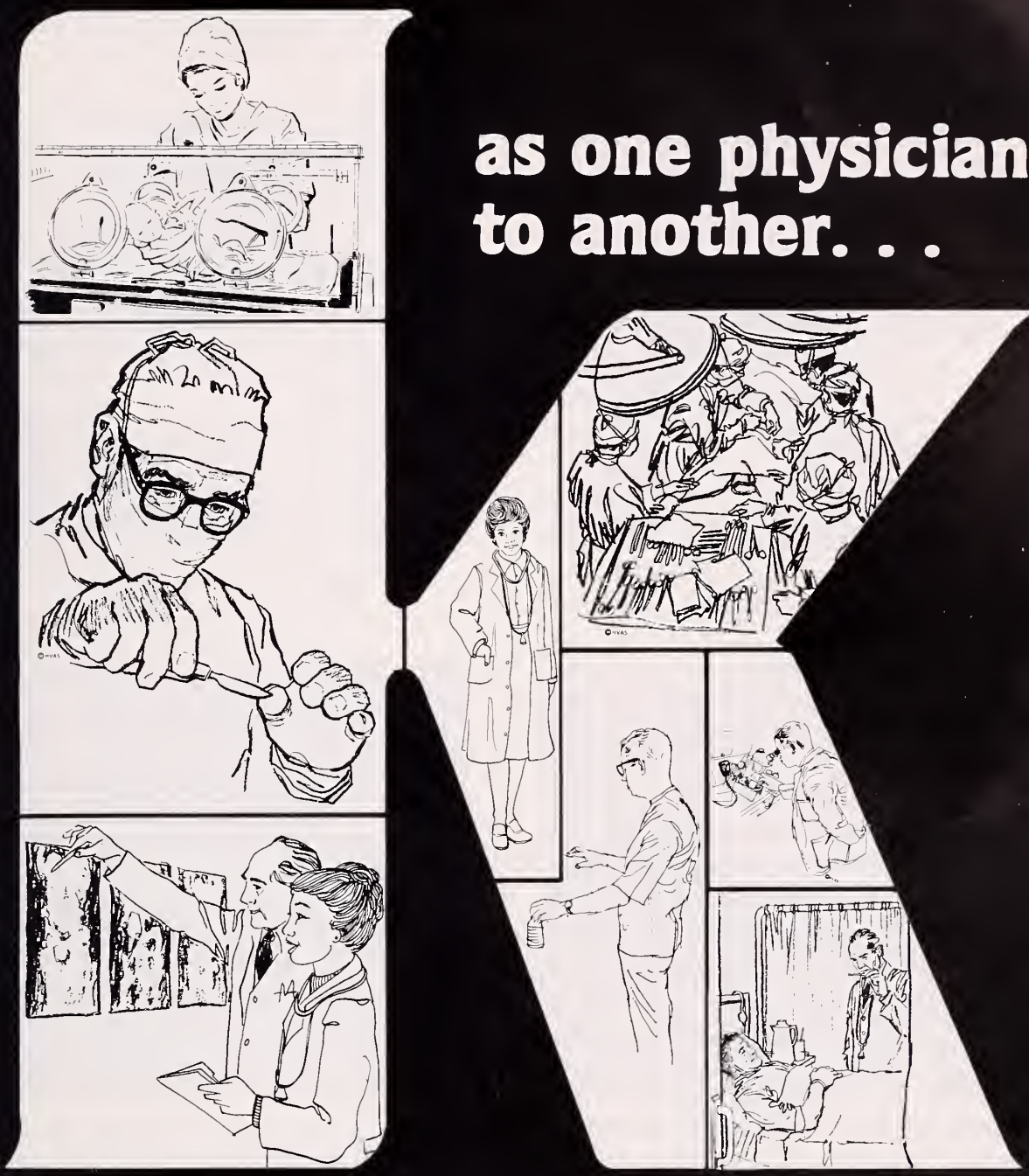
References **1.** Done AK: The toxic emergency. *Emerg Med,* 14:42-77, 1982. **2.** Heller SR, Koniver DA, Fales HM and Milne GWA: Conversational mass spectral search system. Display and plotting of spectra and dissimilarity comparison. *Anal Chem* 46:947-950, 1974. **3.** Helliwell, M, Hampel G, Sinclair E, Huggett A and Flanagen RJ: Value of emergency toxicological investigations in differential diagnosis of coma. *Brit Med J,* 2:819-821, 1979. **4.** Ingelfinger JA, Isakson G, Shine D, Costello CE and Goldman P: Reliability of the toxic screen in drug overdose. *Clin Pharmacol Ther,* 29:570-575, 1981. **5.** Peterson H and Brosstad F: Pattern of acute drug poisoning in Oslo. *Acta Med Scand,* 201:233-237, 1977. **6.** Proudfoot AT and Park J: Changing pattern of drugs used for self-poisoning. *Brit Med J,* 1:90-93, 1978. **7.** Soslow AR: Acute drug overdose: one hospital's experience. *Ann Emerg Med,* 10:18-21, 1981. **8.** Teitelbaum DT, Morgan J and Gray G: Noncondordance between clinical impression and laboratory findings in clinical toxicology. *Clin Toxicol* 10:417-422, 1977. **9.** Walberg CB, Pantlik VA and Lundberg GD: Toxicology test-ordering patterns in a large urban general hospital during five years: an update. *Clin Chem,* 24:507-511, 1978.

Acknowledgements

The authors are indebted to Marcella Tolle for maintaining the Toxicology Screen files and to the entire staff of the Therapeutics and Toxicology Laboratory for excellent technical service.

CORRECTION

The name of George F. Dwyer, Jr., M.D., was inadvertently included in the list of deceased physicians that appeared in the December *Journal of KMA*. Doctor Dwyer is a general surgeon in Louisville and has been a member in good standing of KMA since 1957.



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The fourth annual Kareem B. Minhas Memorial Lectureship will be held on Tuesday, March 8, 1983 at 6:00 P.M. at Kosair-Children's Hospital, Louisville, Kentucky. The lecturer this year will be Alexander S. Nadas, M.D., Professor of Pediatrics, Harvard Medical School. Dr. Nadas is internationally recognized in Pediatric Cardiology. The lecture is sponsored by the University of Louisville and Department of Pediatrics and qualifies for 1.0 category I credit.

A Brief Summary
MELFIAT® 105 UNICELLES® ©
(phendimetrazine tartrate) 105 mg Slow Release Capsules

INDICATIONS AND USAGE: Melfiat® 105 (phendimetrazine tartrate) is indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class (See CLINICAL PHARMACOLOGY) should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, symptomatic cardiovascular disease, moderate to severe hypertension, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors (hypertensive crises may result).

WARNINGS: Tolerance to the anorectic effect usually develops within a few weeks. When this occurs, the recommended dose should be discontinued. Phendimetrazine tartrate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly.

Drug Dependence: Phendimetrazine tartrate is related chemically and pharmacologically to the amphetamines. Amphetamines and related stimulant drugs have been extensively abused, and the possibility of abuse of phendimetrazine tartrate should be kept in mind when evaluating the desirability of including a drug as part of a weight-reduction program. Abuse of amphetamines and related drugs may be associated with intense psychological dependence and severe social dysfunction. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high-dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG, manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxication is psychosis, often clinically indistinguishable from schizophrenia.

USAGE IN PREGNANCY: The safety of phendimetrazine tartrate in pregnancy and lactation has not been established. Therefore, phendimetrazine tartrate should not be taken by women who are or may become pregnant.

USAGE IN CHILDREN: Phendimetrazine tartrate is not recommended for use in children under 12 years of age.

PRECAUTION: Caution is to be exercised in prescribing phendimetrazine tartrate for patients with even mild hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of phendimetrazine tartrate and the concomitant dietary regimen. Phendimetrazine tartrate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage.

ADVERSE REACTIONS: Cardiovascular: Palpitation, tachycardia, elevation of blood pressure.
Central Nervous System: Overstimulation, restlessness, dizziness, insomnia, euphoria, dysphoria, tremor, headache; rarely psychotic episodes at recommended doses.
Gastrointestinal: Dryness of the mouth, unpleasant taste, diarrhea, constipation, other gastrointestinal disturbances.
Allergic: Urticaria.
Endocrine: Impotence, changes in libido.

OVERDOSAGE: Manifestations of acute overdosage with phendimetrazine tartrate include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states.
Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma. Management of acute phendimetrazine tartrate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Acidification of the urine increases phendimetrazine tartrate excretion. Intravenous phentolamine (Regitine) has been suggested for possible acute, severe hypertension, if this complicates phendimetrazine tartrate overdosage.

DOSAGE AND ADMINISTRATION: Since Melfiat® 105 (phendimetrazine tartrate) 105 mg is a slow release dosage form, limit to one slow release capsule in the morning. Melfiat® 105 (phendimetrazine tartrate) is not recommended for use in children under 12 years of age.

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Reference: 1. Sheu YS, Ferguson JA, Cooper JR: *Evaluation of the Abuse Liability of Diethylpropion, Phendimetrazine, and Phentermine,* unclassified document, ADAMHA, HHS. Office of Medical and Professional Affairs, NIDA, 1980, pp 10–15.

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EDITORIAL

THE FIRST OPINION

TAKE measure of the newest dissection of medical practice. We now see several third party carriers endorsing the second opinion on surgical procedures. Despite years of training, tutelage of our teachers, examination by our peers, and regular interactions with colleagues, we still apparently are not to make some critical decisions. Somehow, the well meaning second physician is asked to render an opinion about a patient with whom he has no relationship. Subtleties of signs and symptoms of the differences of palpation and appearance, of mood and sensorium cannot be well capsulized in a brief encounter. The decision making process has been nurtured in all of us. Facts are digested, histories revealed, families consulted, and finally the time arrives to consummate the course of action. This routine is practiced by all of us, though our grist may be different. True, the ordering of a barium enema may not compare in drama to the undertaking of a hysterectomy. Yet medical procedures—thoracentesis, lumbar puncture etc.—can be associated with serious consequences. Costs may be dwarfed by some surgical procedures, but by sheer numbers the many medical procedures would be comparable in cost. Perhaps everything we do should be done in consultation with a chosen peer. Maybe a third person may be employed to mediate a dispute between the original and second physician. There is no end.

I elect to respect the first opinion. I am not uncomfortable with my peers and welcome their interactions.

Stephen Z. Smith, M.D.

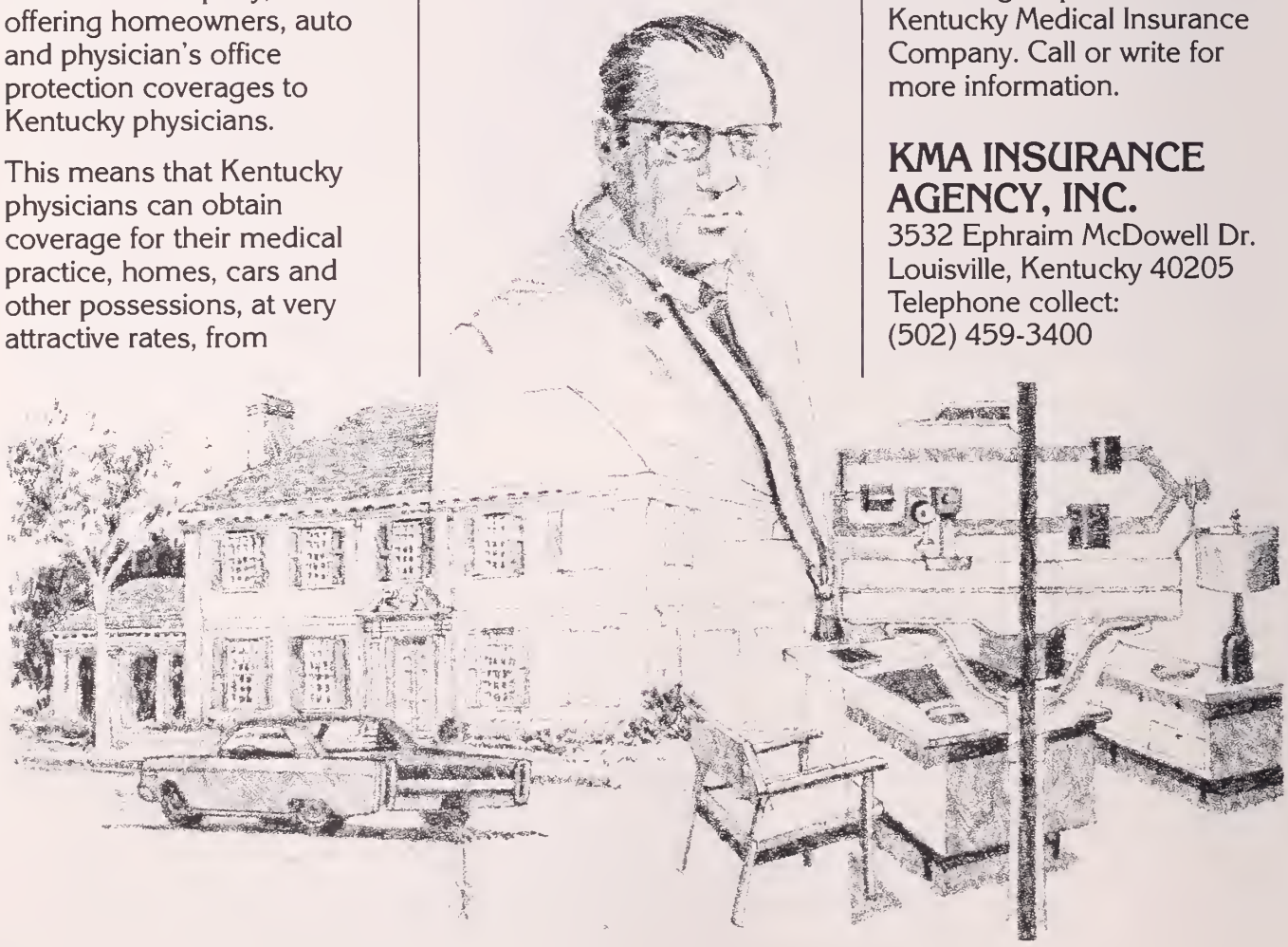
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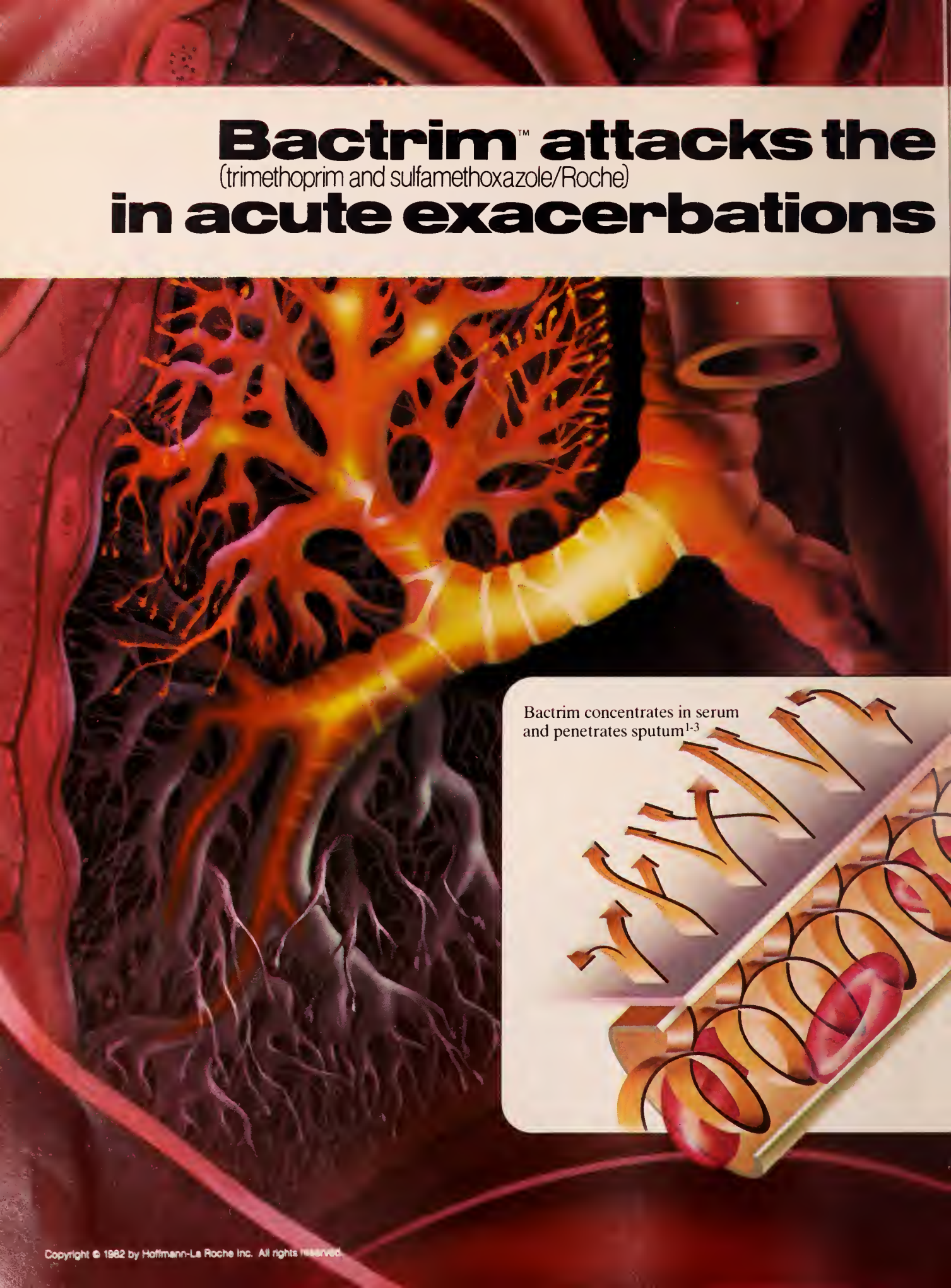
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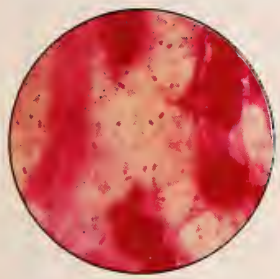
major pathogens of chronic bronchitis*

Bactrim clears sputum of susceptible bacteria

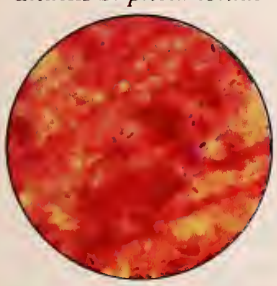
In sputum cultures from patients with acute exacerbations of chronic bronchitis, *H. influenzae* and *S. pneumoniae* are isolated more often than any other pathogens.[4,5] One study of transtracheal aspirates from 76 patients with acute exacerbations found that 80% of the isolates were of these two pathogens.[5]

Bactrim is effective *in vitro* against most strains of both *S. pneumoniae* and *H. influenzae*—even ampicillin-resistant strains. And in acute exacerbations of chronic bronchitis involving these two pathogens, sputum cultures taken seven days after a two-week course of therapy showed that Bactrim eradicated these bacteria in 91% (50 of 55) of the patients treated.[6]

attacks *H. influenzae*—even ampicillin-resistant strains



attacks *S. pneumoniae*



Bactrim reduces coughing and sputum production

In three double-blind comparisons with ampicillin *q.i.d.*, Bactrim DS proved equally effective on all clinical parameters.[7-9] Bactrim reduced the frequency and severity of coughing, reduced the amount of sputum produced and cleared the sputum of purulence.

Bactrim has the added advantages of *b.i.d.* dosage convenience and a lower incidence of diarrhea than with ampicillin, and it is useful in patients allergic to penicillins.

Bactrim also proved more effective than tetracyclines in 10 clinical trials involving nearly 700 patients.[10] Overall clinical condition of the patients, changes in sputum purulence, reduction in sputum volume and microbiological clearance of pathogens—all improved more with Bactrim therapy than with tetracyclines. G.I. side effects occurred in only 7% of patients treated with Bactrim compared with 12% of tetracycline-treated patients. (See Adverse Reactions in summary of product information on next page.)

Bactrim is contraindicated in pregnancy at term and nursing mothers, infants under two months of age, documented megaloblastic anemia due to folate deficiency and hypersensitivity.

Bactrim DS. For acute exacerbations of chronic bronchitis in adults* when it offers an advantage over single-agent antibacterials.

References: 1. Hughes DTD, Bye A, Hodder P: *Adv Antimicrob Antineoplastic Chemother 1/2*:1105-1106, 1971. **2.** Jordan GW *et al: Can Med Assoc J 112*:91S-95S, Jun 14, 1975. **3.** Beck H, Pechere JC: *Prog Antimicrob Anticancer Chemother 1*:663-667, 1969. **4.** Quintiliani R: Microbiological and therapeutic considerations in exacerbations of chronic bronchitis, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts;* Princeton Junction, NJ, Communications Media for Education, Inc., 1980, pp. 9-12. **5.** Schreiner A *et al: Infection 6*(2):54-56, 1978. **6.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **7.** Chodosh S: Treatment of acute exacerbations of chronic bronchitis: results of a double-blind crossover clinical trial, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts. Op. cit.*, pp. 15-16. **8.** Chervinsky P: Double-blind clinical comparisons between trimethoprim-sulfamethoxazole (Bactrim™) and ampicillin in the treatment of bronchitic exacerbations. *Ibid.*, pp. 17-18. **9.** Dulfano MJ: Trimethoprim-sulfamethoxazole vs. ampicillin in the treatment of exacerbations of chronic bronchitis. *Ibid.*, pp. 19-20. **10.** Medici TC: Trimethoprim-sulfamethoxazole (Bactrim™) in treating acute exacerbations of chronic bronchitis: summary of European clinical experience. *Ibid.*, pp. 13-14.

Economical b.i.d.

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole/Roche)

*Due to susceptible organisms. **Please see next page for summary of product information.**

Bactrim™

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To data, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

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Injection Sclerotherapy

A Safe Innovation In The Care Of The Variceal Bleeder

GERALD M. LARSON, M.D. and HIRAM C. POLK, JR, M.D.

Bleeding esophageal varices continues to be a very lethal and difficult problem to treat. This report describes our experience with a relatively new method of treatment, injection sclerotherapy, and presents the early results of its use. We treated 18 consecutive patients who had bleeding esophageal varices with intravariceal injection of 5% sodium morrhuate, using a specially designed needle injector that is passed through a flexible endoscope. The patients received injections at monthly intervals until the varices disappeared. Ten patients were actively bleeding at the time of their initial injection, and prompt control of the bleeding was achieved in eight patients. The other two patients underwent emergency operation but both died. Twelve patients were discharged from the hospital; 11 are alive after a median followup period of six months. Recurrent variceal bleeding occurred only during the first month of treatment in three patients and was secondary to small esophageal ulcerations. In our experience, injection sclerotherapy controls most cases of emergency variceal bleeding and has prevented recurrent hemorrhage in the short term.

Bleeding from esophageal varices is a highly lethal condition for which there is no really satisfactory treatment. Over the past four decades, several methods of treatment have been introduced and evaluated, but the overall mortality rate from bleeding varices remains at 50% or more, regardless of the treatment used. Balloon tamponade achieves temporary control of bleeding in most patients, but it is associated with severe complications and a high rate of recurrent hemorrhage.[1] While vasopressin is easily administered intravenously and will control bleeding in approximately 50% of patients, its use has not yet significantly altered patient outcome.[2] Transhepatic embolization of esophagogastric varices often stops variceal hemorrhage; however, occasionally it causes portal vein thrombosis and it does not provide lasting protection.[3] The emergency portacaval shunt, which has been advocated in the last 15 years, has an associated operative mortality rate of about 50%, and has not been widely used.[4]

In 1939, Crafoord and Frenckner[5] first reported the technique of injection sclerotherapy (IS), using a rigid esophagoscope and general anesthesia. Although they and others achieved good results, their reports were largely ignored

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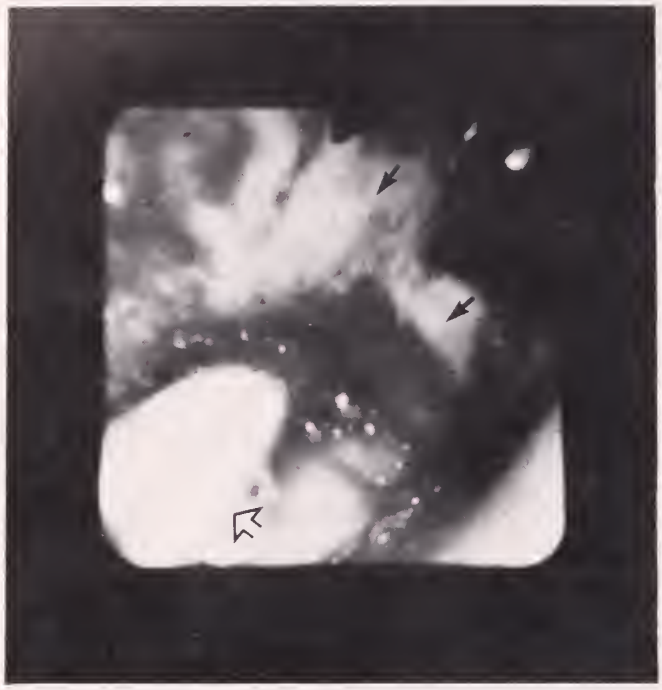


Fig. 1: An endoscopic view of the sclerotherapy technique. Pictured are two varices (closed arrows) in the distal esophagus and the injector (open arrow) with the needle advanced into the bleeding varix as the sclerosant, sodium morrhuate, is injected.

and many surgeons used portasystemic shunts to control variceal hemorrhage. European and South African investigators[1,6] have recently revived interest in IS and have reported promising results in patients with acutely bleeding varices, as well as in patients with a history of variceal hemorrhage. The purpose of this report is to describe one technique of IS and to present the treatment results in an initial group of 18 consecutive patients.

Methods

All patients admitted to the Surgical Service at the University of Louisville undergo diagnostic endoscopy for hemorrhage from the upper alimentary tract. Patients who are bleeding from esophageal varices are candidates for IS, which is the treatment currently recommended for most of these patients. Since June, 1981, 10 primary surgical patients and eight patients referred to the Surgical Service for treatment of variceal bleeding have been treated with IS. Ten patients were actively bleeding at the time of initial injection, while the remaining eight patients had bled two or more units of blood within one month prior to the first injection. The Child's classification of liver function was determined in each patient.[7]

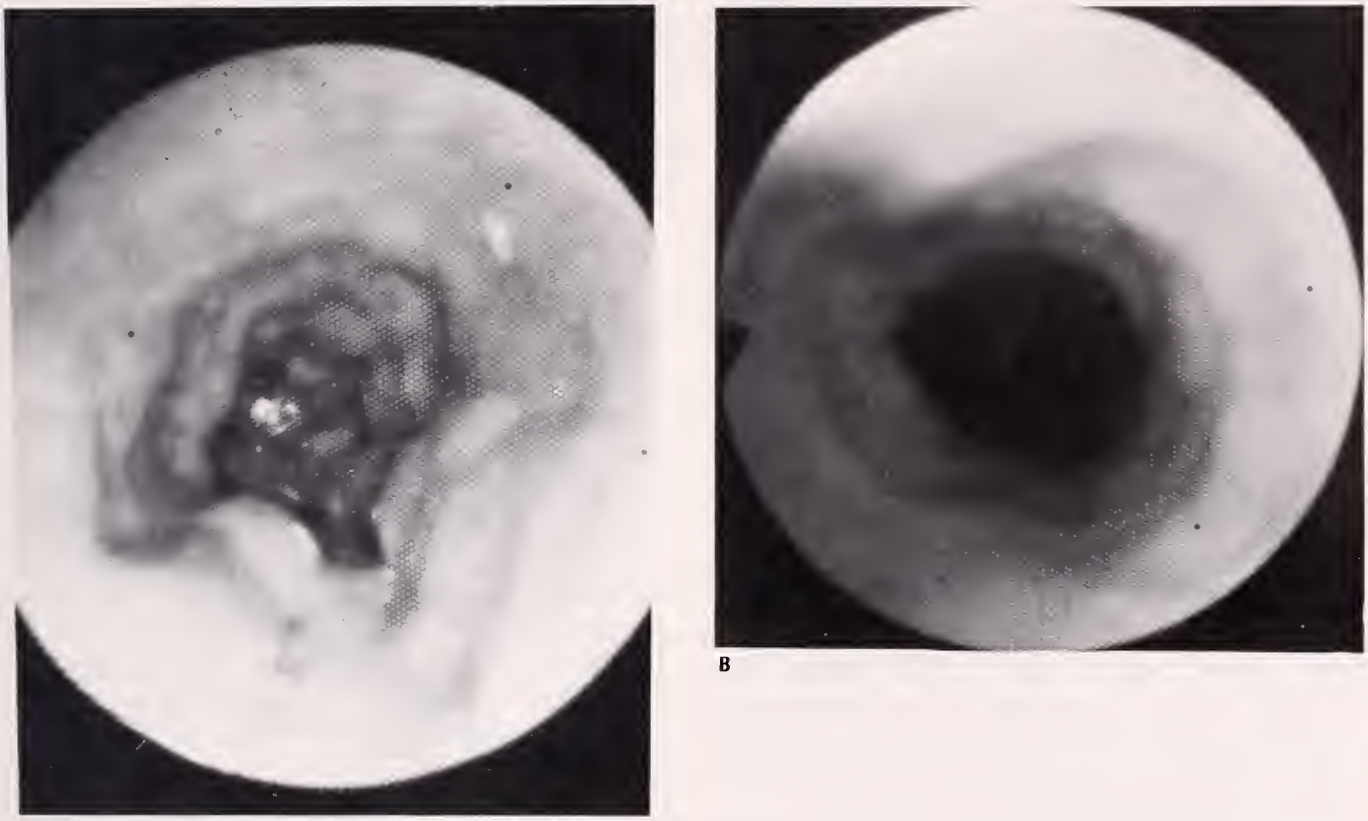
Table 1
Child's Classification and Etiology of Portal Hypertension

Child's Class	Pts.
A	3
B	3
C	12
Cause of Portal Hypertension	**Pts.**
Alcoholic Cirrhosis	16
Cryptogenic	1
Portal Vein Thrombosis	1

Technique

Sclerotherapy is performed with standard flexible endoscopes. A 2-channel endoscope is preferred for the initial session, as the second channel improves irrigation and suction of the distal esophagus and stomach and maintains a clear field for viewing. During subsequent injection sessions, a single channel scope is generally adequate. The procedure is performed with topical anesthesia of the pharynx plus intravenously administered sedatives. The sclerosant is 5% sodium morrhuate, which is injected directly into the varix with a 23-gauge commercially available needle injector (Fig. 1). Gastric balloons or inflatable cuffs that fit around the distal part of the scope have not been used.

If active bleeding is not present, screening endoscopy of the stomach and duodenum is first performed. The scope is then withdrawn to the gastroesophageal junction and each variceal column is injected with 2 ml of sodium morrhuate. After each injection, the needle is withdrawn, but the injector hub is held against the site for an additional 15 seconds to minimize back bleeding. Following injection, a noticeable wheal develops in the varix and overlying mucosa at the injection site, which usually persists for the duration of the procedure. If backbleeding occurs at the site, the varix is reinjected with another 1 or 2 ml of sclerosant. The scope is then withdrawn 5 cm proximally and varices at that level are also injected.



A

B

Fig. 2: (A) The endoscopic view of the distal esophagus of a patient who had bled on three occasions from esophageal varices. There are two major columns of varices in the mid-esophagus and several columns in the distal esophagus. (B) The same esophagus after four injections sessions, three months later. The wall of the esophagus is now smoother and only two small variceal columns are present.

When active bleeding is present, we clear all blood by performing a lavage of the stomach and esophagus with a large tube. The bleeding varix is then directly injected until hemostasis is achieved. Repeat injections are often required; as much as 5 ml of sclerosant has been injected into a single varix. Generally, a total of 15 to 20 ml of sclerosant is used during the initial procedure, with less required for subsequent injections. Nasogastric tubes are not routinely inserted following IS. Awake and alert patients are allowed to take liquids ad lib two hours after the procedure; regular diet is resumed the following day. Medication is prescribed for pain during the first two days because retrosternal discomfort is usually present. Chest x-rays are also obtained during the first two days to check for effusions and atelectasis. After six or seven days, during the same hospital stay, repeat endoscopy and IS of persistent, nonthrombosed varices are performed. Patients are observed for an additional two days in hospital and are then discharged, with repeat IS scheduled monthly until the varices disappear. (Fig. 2)

Results

The 18 patients in this series have received a total of 47 injections for an average of 2.6 injection sessions per patient. Three patients have not kept routine appointments for subsequent endoscopy and have not received injections on a regular basis as prescribed in the protocol. Alcoholic liver disease was the cause of the portal hypertension in 16 of the 18 patients and 12 patients had Child's Class C liver disease (Table 1). All patients were admitted to the hospital because of bleeding. Ten patients underwent emergency IS, while eight patients received injections under more controlled conditions, after the bleeding had stopped.

Immediate control of bleeding was achieved in eight of 10 patients with active variceal hem-

Table 2
Early Results of Sclerotherapy

Variceal Status	Pts.	Acute Control	Rebleeding Varices	Deaths	Survival (30 day)
Active Bleeding	10	Yes—8 No—2	2	4	4
			2	2	0
Not Bleeding	8	—	1	0	8
	18				12/18 (67%)

orrhage. Rebleeding occurred after injection in two of these eight patients at six days and three weeks respectively. In one patient, the rebleeding from a varix was controlled by reinjection, while in the other, the bleeding from an esophageal ulceration stopped spontaneously. The four deaths in this group (Table 2) were caused by liver failure in two patients, by pulmonary failure in one patient and by respiratory arrest in another. The two patients in whom IS failed underwent emergency operation but later died. One of these patients was bleeding from gastric varices in the cardia of the stomach.

All eight patients undergoing nonemergent IS survived. In this group, one patient rebled from a superficial esophageal ulcer on the third day following IS.

Course After Discharge

Twelve patients were discharged from the hospital and have been treated and followed-up for a mean of six months; the results are summarized in Table 3. One patient who had received only one emergency injection died suddenly at home six weeks after discharge. The details of his death are not available, but it is suspected that recurrent variceal bleeding was the cause. There were three episodes of bleeding that was due to gastritis in two patients and due to duodenitis in one patient. Eleven patients are still alive with a mean followup of six months.

Therefore, of the original 18 patients entering this series, 11 patients (62%), are still alive. The mortality rate was highest during the initial 10 days of treatment when six of the seven deaths occurred. The rate of recurrent bleeding from varices in this series is 16% and such bleeding has not been difficult to control. It may, however, have contributed to the death of one patient.

Table 3
Results of Sclerotherapy after Patient Discharge

Patients	Rebleeding	Deaths	Survival
12	Varices 1 Gastritis 3	1	11 (2-9 mo)

Table 4
Side Effects of Sclerotherapy in 18 Patients (47 Sessions)

	Most Patients
Pain, Retrosternal	6
Fever (>103°)	2
Pleural Effusion	2
Aspiration	2
Esophageal Ulceration	4
Bleeding—Post Injection	3

The complications are listed in Table 4. Retrosternal pain often occurred during the injection and in the ensuing 24 hours and patients often had transient temperature elevation. Three patients' temperature exceeded 103° F.; one patient had a bacteremia caused by a streptococcus organism. Aspiration, always a potential problem in patients with active bleeding, occurred in two patients. Esophageal ulceration due to peri-injection mucosal slough occurred in four patients. These ulcerations were noted as early as four days and as late as four weeks after injection. All ulcerations healed uneventfully within three to four weeks. There was no instance of stricture or perforation of the esophagus.

Discussion

Despite the great deal of attention and study that portal hypertension has received over the past four decades, there is still no widely accepted treatment for bleeding esophageal varices. The hospital mortality rate remains approximately 50%, the rate of recurrent bleeding is high, and the overall longterm prognosis is poor. In a 1961 study[8] on the natural history of cirrhosis, Garceau and Chalmers and the Boston Interhospital Liver Group found that in a group of 467 patients with varices, only 34% of patients survived the first year. Moreover, when hematemesis had occurred, the survival figure at one year was even lower. One-third of the deaths were directly attributable to esophageal bleeding.

More recently, Graham and Smith[9] analyzed the course of 85 patients, most of whom were alcoholic, with bleeding esophageal varices, and observed a hospital mortality rate of 42% in the first six weeks. The survival rate was only 34% at one year, which is similar to the results in the Boston study[8] of two decades earlier, and about 40% of all deaths were related to recurrent episodes of variceal bleeding. Lower mortality figures have been reported from centers which combine medical and surgical treatment of patients with bleeding varices. For example, Johnson *et al*[3] have decreased their 30-day mortality rate to 36% using such an approach, and report a one-year mortality rate of 50% in their clinic population. Overall, the prognosis for patients with bleeding varices has not improved measureably.

There have been periods of enthusiasm for use of the emergency portocaval shunt, an operation which does control variceal bleeding effectively but is, unfortunately, associated with a considerable mortality rate. In a series of 180 patients of Orloff *et al*[4], the operative mortality rate for emergency shunts was 42% for all patients, and 49% for Child's Class C patients. The mortality rate ranges from 5-15% when elective shunts are used, but elective shunts are not often recommended for use in patients with severe liver disease, thereby, excluding a sizeable portion of patients from any treatment benefit. Furthermore, few other clinics have been able to match Orloff's accomplishment.

Injection sclerotherapy offers the following advantages over portasystemic shunts, emergency or elective: (1) It can be used to treat most patients with bleeding varices, regardless of their Child's classification, their associated risk factors or the severity of the illness. There are relatively few contraindications to the procedure if the patient can safely undergo endoscopy. (2) The equipment and staff support required are not excessive and are usually available in most hospitals with endoscopic capability. (3) Blood is not shunted away from the liver as it often is after some shunting operations and the procedure does not compromise liver function. (4) The complication rate of IS is quite low and the success rate of stopping active bleeding has been good.[1,10,11]

Injection sclerotherapy successfully controls both acute and chronic bleeding. Lewis *et al*,[10] using techniques similar to those in this study, achieved control of acute bleeding in more than 90% of patients and, over a one-year period, observed a rebleeding rate of 16% after IS. Other investigators, using a variety of injection techniques, have also documented control of acute bleeding in more than 90% of patients, and hospital mortality rates of less than 30%. Terblanche *et al*[1] retrospectively compared their results with esophageal tamponade followed by IS in 71 patients with their results from an earlier series, in which only the Sengstaken-Blakemore tube was used, without sclerotherapy. Adding sclerotherapy to the treatment increased the control rate of hemorrhage from 40% to 95%, decreased the rebleeding rate from 60% to 5%, and lowered the mortality rate per admission from 60% to 28%.

At least one-third of all deaths in patients with bleeding varices are due to complications of bleeding, and most patients discharged from hospital will experience rebleeding of the varices during the first year.[8] One study[9] has attributed as many as 40% of subsequent deaths following patients' discharge from hospital to variceal hemorrhage. Successful IS is not likely to improve liver or renal function in these patients, but it should improve the survival rate by preventing bleeding-related deaths.

To date, only one control trial of injection sclerotherapy versus standard medical treatment has been reported. Macdougall *et al*,[6] at the King's College Hospital in London, randomized 107 patients into either a sclerotherapy group or a medical treatment group after initial control of their bleeding had been achieved. The sclerotherapy group fared better because the rebleeding rate in that group was significantly less than in the control group and the survival rate in the sclerotherapy group was higher at one year than in the control group—75% versus 58%. Of note, 17 of 22 deaths in the control group resulted from variceal hemorrhage. The authors noted that once the varices were obliterated by IS, rebleeding occurred infrequently. This observation was also made in the current study. All three episodes of recurrent bleeding

from varices occurred within the first 30 days of treatment, when varices had only started to decrease in size and were not completely thrombosed.

Although several techniques of injection have been described in the literature, there is no agreement on the preferred method. Some centers recommend the rigid, Negus esophagoscope and perform the injection while the patient is under general anesthesia. Other groups use flexible endoscopy in conjunction with either gastric balloons or balloon cuffs that are attached to the endoscope, and which are intended to reduce venous outflow from the varices and promote stasis. Both intravariceal and perivariceal injection techniques have been described. In this series, we have injected the varices and have not used balloons or cuffs as adjuncts. With direct injection, the varices became swollen for several minutes, which seems to be long enough to promote thrombus formation in the varix. This was documented at autopsy in one patient who died of liver failure five days after undergoing IS. Extensive thrombus formation was found in the submucosal varix as well as an extensive intramural inflammatory response at the injection site.

The mortality rate is 33% at 30 days in this study, which is lower than the 50% rate that is frequently reported in the literature and which supports the contention made in several other reports that this procedure has lowered the early mortality rates for variceal bleeding. Prospective studies are needed to demonstrate scientifically that IS provides early, longterm survival benefit to patients with bleeding varices. Although the early reports are promising, one must remember that in the past, there has been enthusiasm, often shortlived, for various forms of treatment of portal hypertension and varices. If sclerotherapy provides lasting protection against variceal bleeding, real improvement in survival rates should be possible.

References **1.** Terblanche J, Yakoob HT, Bornman PC, *et al*: Acute bleeding varices. A five-year prospective evaluation of tamponade and sclerotherapy. *Ann Surg* 194:521-530, 1981. **2.** Chojkier M, Groszmann RJ, Atterbury CE, *et al*: A controlled comparison of continuous intraarterial and intravenous infusions of vasopressin in hemorrhage from esophageal varices. *Gastroenterology* 77:540-546, 1979. **3.** Johnson WC, Nabseth DC, Widrich WC, *et al*: Bleeding esophageal varices. Treatment with vasopressin, transhepatic embolization and selective splenorenal shunting. *Ann Surg* 195:393-400, 1982. **4.** Orloff MJ, Bell RH Jr, Hyde PV, Skivolocki WP: Longterm results of emergency portacaval shunt for bleeding esophageal varices in unselected patients with alcoholic cirrhosis. *Ann Surg* 192:325-240, 1980. **5.** Crafoord C, Frenckner P: New surgical treatment of varicose veins of the esophagus. *Acta Otolaryngol* 27:422-429, 1939. **6.** Macdougall BRD, Theodossi A, Westaby D, Dawson JL: Increased longterm survival in variceal haemorrhage using injection sclerotherapy. *Lancet* 124-127, January 16, 1982. **7.** Child CG III, Turcotte JG: Surgery and portal hypertension. In: Major problems in clinical surgery: the liver and portal hypertension. Vol. 1. Philadelphia: WB Saunders, 1-85, 1964. **8.** Garceau AJ, Chalmers TC, Boston Inter-Hospital Liver Group: The natural history of cirrhosis. I. Survival with esophageal varices. *N Engl J Med* 268:469-73, 1963. **9.** Graham DY, Smith JL: The course of patients after variceal hemorrhage. *Gastroenterology* 80:800-809, April, 1981. **10.** Lewis J, Chung RS, Allison J: Sclerotherapy of esophageal varices. *Arch Surg* 115:476-480, 1980. **11.** Hedberg SE, Fowler DL, Ryan RLR: Injection sclerotherapy of esophageal varices using ethanolamine oleate. A pilot study. *Am J Surg* 143:426-431, 1982.

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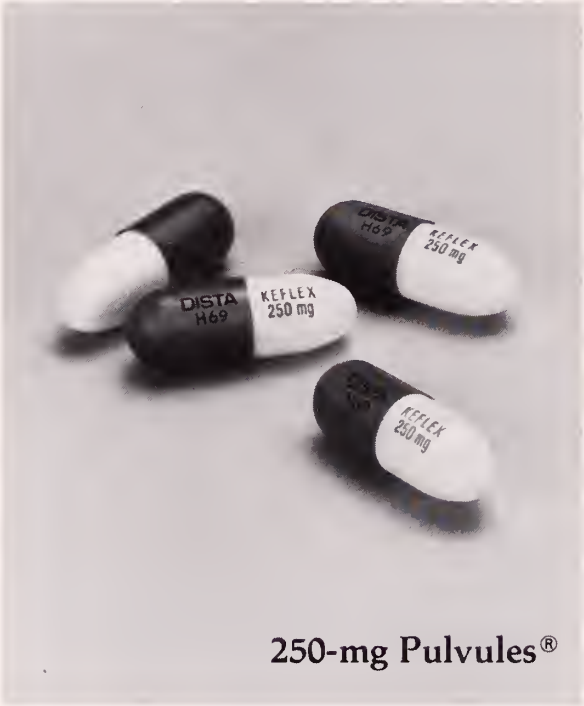
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SPECIAL ARTICLE

Medical Malpractice and Ordinary Care in Kentucky

JUDGE MICHAEL O. McDONALD, NANCY UTTERBACK, M.S.L.S.
and RICHARD A. WRIGHT, M.D.

Medical malpractice is an entity that is poorly understood and often neglected by the medical profession. Presented herein is an overview of the topic including standards for ordinary care and negligence in the Kentucky Court system. A review of the common law developed of such standards is presented.

MALPRACTICE is a term without dignity. In the broadest sense, it is bad or wrongful professional performance. It requires a determination by a jury that the conduct of a professional in a particular instance was negligent. Our society demands that we not harm one another, provided there is no legal privilege for us to do so. If we do commit an unprivileged harm or injury, we have committed a tort. A tort is a civil (as opposed to criminal) wrong or injury. Negligence is a specialty or division of the law of torts, and is defined as the failure to use ordinary care. All persons in our society have the duty to exercise ordinary care in their undertakings. Therefore, even though we may refer to the unprivileged harm or injury performed by a professional as "malpractice," it is really negligence; but the term "medical negligence" has never taken hold, nor is it suggested that it is preferable.

The standard of care required of physicians was applied in England in 1767 and is still applicable today. An English court said, "Although the defendants in general may be as skillful in their respective professions as any two gentlemen in England, yet the court cannot help saying that in this particular case they have acted ignorantly and unskillfully contrary to the known rule and usage of physicians and surgeons."[1] In the earliest reported American case on professional liability of doctors, *Cross v. Guthre*,[2] concerning a mastectomy, the court held sufficient a complaint that the physician undertook the operation and performed it in so unskillful and cruel a manner that the patient died within three hours.

In Kentucky, the case of *Blair v. Eblen*[3] established the new standard for medical care. Prior to Blair the standard of care was what is called "the community standard." This meant that if the community standard was poor then the health care provider's care could be poor: the liability for care did not rise above the community standard. The decision in Blair retreated from the community standard and stated that thereafter the standard of care would be established by the medical profession and not by lay persons in the courts. Therefore, Blair laid down the instruction now given to a jury which is the stock instruction for physicians and hospitals:

> That the defendant (hospital or doctor) was under a duty to use that degree of care and skill which is expected of a reasonably competent practitioner (or hospital) in the same class to which he belongs, acting in the same or similar circumstances.

With the decision in Blair came the use of outside medical expert testimony. Before Blair, the experts were all from the same or similar communities. Outside experts could not set the standard of care for a particular community. Now the profession as a whole sets the standards. The outside medical experts, often referred to as "hired guns," come into town and offer testimony to the jury stating what, in their opinion, the profession considers a particular standard of care. This is the reason why a physician from New York or California will tell a local jury that a local physician did not perform in a manner the profession would ordinarily expect.

Perfection is not required even under the Blair decision, and as it has been said, perfection is a form of death. One can go back to 1907 in the case of Dorris v. Warford,[4] where the trial court instructed the jury requiring the doctor to use his **best** skill and ability. On appeal, Kentucky's highest court said, "No

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man is always at his best. One who employs a professional may expect from him the ordinary care and skill of his profession. He is liable if he does not give this, but no more can be demanded."[5]

The Kentucky case of *Deutsch v. Shein,*[8] enunciates the principle that a physician is responsible for all results flowing from his negligent acts. In that case a physician who had negligently administered X-rays to a woman while she was pregnant was held liable for mental and physical pain and suffering the woman endured upon learning of her pregnancy and electing to abort the fetus.

Although the ultimate consequence of a physician's negligence may be an injury the severity of which he could not have anticipated, he remains liable for the injury, provided his negligence was a substantial factor in bringing about the event *(ie,* radiation) which caused the injury. This principle is limited only by considerations of public policy. In other words, the law will cut off the negligent doctor's liability once the consequences of his act have reached a certain point. This point is not capable of precise definition and will be determined in each case by the courts.

Patients are often treated by a physician in a hospital, as opposed to just in the physician's office. The hospital, through its agents, servants and employees, also has the duty to exercise ordinary care in the treatment and care of its patients. A hospital receives patients under an implied obligation (contract theory) to exercise "ordinary care" for their safety, and such care should be in proportion to the physical and mental ailments of the patient, known or discovered.[6] However, it was decided in *Miners Memorial Hospital Ass'n of KY v. Miller*[7] that the duty of ordinary care imposed upon a hospital does not require that the performance of every act be the most cautious and the most skillful possible. Regardless of the standard of care, in order to reach the hospital, negligence must be shown or proven against its nonphysician staff, *ie,* nurses, by way of a doctrine called *respondeat superior,* which means literally, let the superior reply. Another term for the concept is "vicarious liability" which means that one must answer for the acts of another.

Respondeat superior is a legal doctrine invoked when there is a master-servant relationship. It stands for the proposition that when an employer (referred to as the master) is acting through the facility of an employee or agent (referred to as the servant), and when liability is incurred during the course of the transaction or event due to some fault of the servant *(ie,* nurse), then the employer or master is required to accept responsibility. A practical consideration for this principle is what is called the "deep pocket" theory. Persons in the position of employees or servants usually are not financially able to respond to the damages they may cause, so the master must bear the financial responsibility for his servants' acts.

Vicarious liability which can be imposed on a hospital by negligence has been divided into two categories: one is administrative negligence, and the other, medical negligence. At one time a hospital was only responsible for administrative negligence. For example, it is said that administering blood by means of a transfusion to the wrong patient is administrative negligence, while administering the wrong blood to the right patient is medical negligence.

Today, the distinctions between administrative and medical negligence are so confused that the law does not make much distinction between them. However, hospital nurses are still under a duty to monitor the condition of their patients. This duty includes properly preparing the patient's chart. It is also the duty of a hospital, through its nurses, to carry out the medical orders of the physicians and also to report anything to the physicians that is out of the ordinary.

A jury in Kentucky in a case concerning a hospital's negligence would be instructed that if they believed a hospital through its nurses had failed in its duty, and if this failure was a substantial factor in causing a patient's injury, then the jury should determine that the hospital was in fact negligent. Nine of the 12 jurors must agree on a finding or verdict in a civil case in Kentucky. If fewer than nine agree, the result is a hung jury.

There are cases where more than one hospital is involved in the treatment of a single patient. As an example, Louisville's University Hospital has arrangements or agreements with several other hospitals in the area. If a patient is brought to University Hospital and care is needed by a specialist not at the hospital, physicians from an affiliate with the necessary specialty would be brought in to treat the patient at University Hospital. If a jury were to find that the two hospitals shared the trading of specialists, then both hospitals would have the same general duty of care to the patient. In addition, the affiliate would have the duty to provide reasonably competent practitioners to University Hospital. The affiliate also would have the added duty to supervise, maintain and control its medical staff and residents consistent with the standards of a teaching hospital affiliated with the University of Louisville.

Attending physicians have additional duties imposed upon them if they are also acting in the capacity as teachers of residents. They must use that degree of care and skill which would be reasonably expected of competent practitioners in the same class to which they belong, acting in the same or similar circumstances. This general duty may include the duty to exercise ordinary care in the supervision and training of the residents in their service. As an example, this would include proper supervision and training for performing various medical procedures, such as inserting a subclavian catheter. Medical journals may be used in a trial to indicate current techniques and developments in the procedure. The residents themselves are expected to use the same degree of care and skill as other practitioners in the same class to which they belong *(ie,* other residents) acting in the same or similar circumstances.

In a situation where there is a patient in one hospital being treated by physicians of another affiliate, and residents are also involved, a malpractice case may involve very complicated instructions to a jury because it is necessary to determine for whom the physicians were working at the time an injury occurred. The jury must determine whether the physicians and residents were simply performing duties for their affiliate at an offsite location, if they lost their identity as servants of the affiliate and became servants of the other hospital, or if the physicians and residents were servants of both hospitals at the same time.

These circumstances bring into consideration the doctrine of "borrowed or loaned servant." This doctrine is becoming very prevalent in medical cases. Simply stated, it is a theory that a servant of one employer-master may be transferred, loaned to or borrowed by another employer-master. Several employers may be involved in such a situation. Under the doctrine of *respondeat superior,* it is necessary to determine which employer or employers will bear the loss or "pick up the check," in a malpractice action. In many cases the employers involved may be required to share the liability.

The implication of the "borrowed servant" doctrine is that if a servant-employee is directed or permitted by his master-employer to perform services for another (master-employer), he may become the servant of such other in performing the services. In addition, he may become the other's servant as to some acts and not as to others.

This doctrine can further be explained using the Kentucky case of *City of Somerset v. Hart.*[9] In this case a scalpel was left in the patient's bladder after a surgical procedure. The hospital argued that the operating room staff were "borrowed servants" of the surgeon and that the hospital, as their general employer, was not liable for their negligence. The court's response was that there is a distinction between administrative and medical acts. For example, the hospital is the master of nonphysician staff regarding administrative acts of negligence, and the surgeon is the master regarding medical acts of negligence. The failure to account for a scalpel blade is an administrative act of negligence based on omission and is chargeable to the hospital. The court laid down the following rule: "Although hospital employees are primarily servants of the hospital and not of the doctor, the familiar rule of agency law that a servant may serve two masters simultaneously, and at time only momentarily, comes into play when interns, nurses and other hospital personnel assist a physician or surgeon as he treats a patient."[10] Under the doctrine of respondeat superior, it was not necessary to automatically apply the "borrowed servant" doctrine, thereby transferring or inputing the negligence of the nurse on the basis that either one or the other (doctor or hospital) would be held responsible. The court said, "This is to ignore the legal principle that a person may be the servant of two masters, not joint employers, at one time as to one act, if the service to the one does not involve the abandonment of the service to the other."[11] The court held that the doctrine of **respondeat superior** in this instance was equally applicable to both employers. Both had an interest in having the blades accounted for; consequently, the operating room staff acted as servants of both the surgeon and the hospital as a matter of law.

A malpractice suit will involve many different legal theories, depending on the situation and the injury involved. This article has been an overview of the ordinary care required of the health care provider and the legal interrelationships between the physician, the hospital, the nurses and other staff members.

References **1.** *Slater v. Baker and Stapleton,* 95 Eng. Rep. 86 (K.R., 1767). **2.** *Cross v. Guthre,* 2 Root 90 (Conn. 1777). **3.** *Blair v. Eblen,* 461 S.W.2d 370 (Ky. 1970). **4.** *Dorris v. Warford,* 124 Ky. 768, 100 S.W. 312 (1907). **5.** *Id.* at 772-73. **6.** *Lexington Hospital v. White,* 245 S.W.2d 927 (Ky. 1952). **7.** *Miners Memorial Hospital Ass'n of KY v. Miller,* 341 S.W.2d 244 (Ky. 1960). **8.** *Deutsch v. Shein,* Ky., 597 S.W.2d 141 (Ky. 1980). **9.** *City of Somerset v. Hart,* 549 S.W.2d 814 (Ky. 1977). **10.** *Id.* at 816. **11.** *Id.* at 817.

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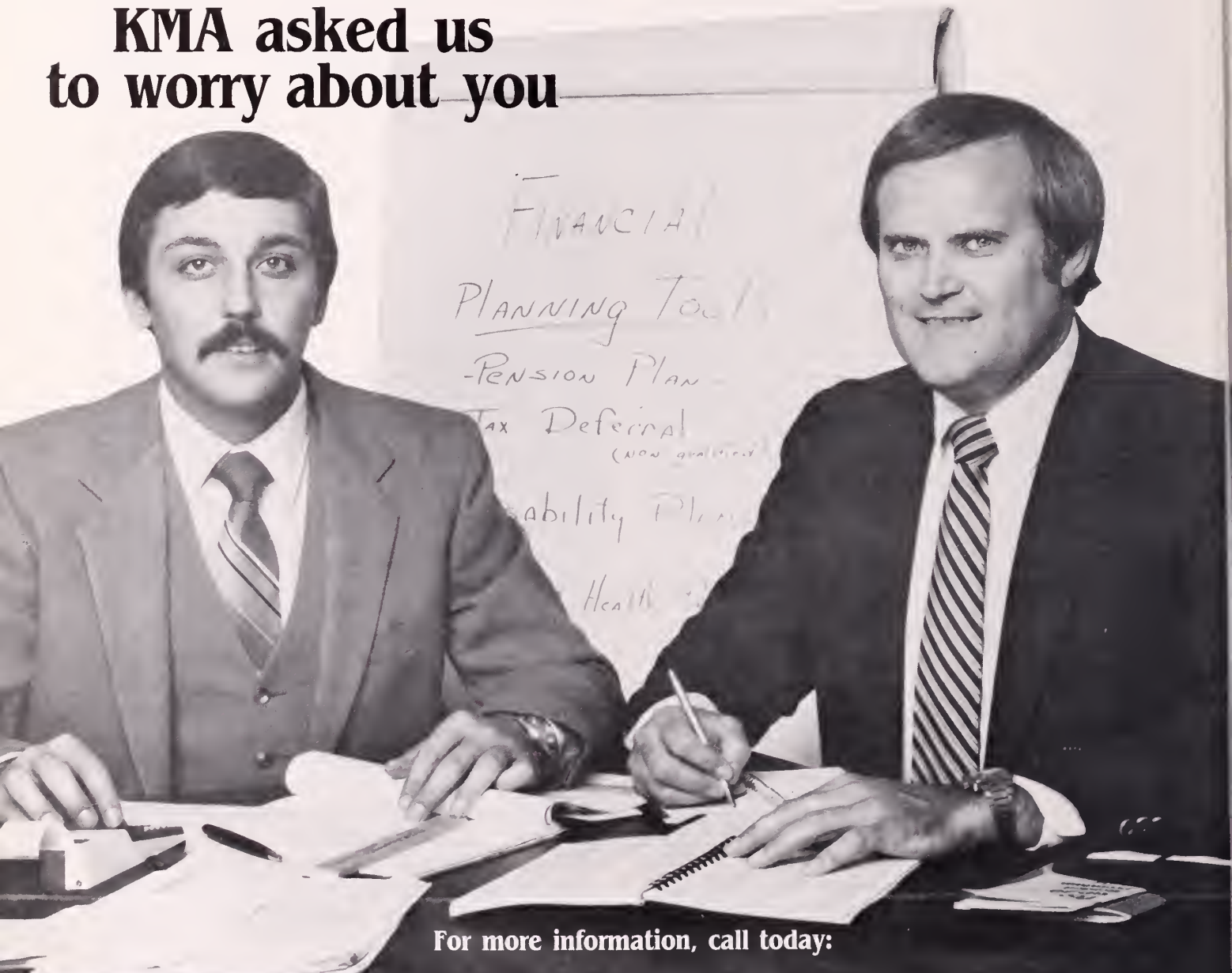
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LETTERS TO THE EDITOR

The Letters To The Editor column is a means for the KMA physicians to express their opinions and viewpoints on varied topics. If you have an item you would like brought before your fellow practitioners, please submit it to Letters To The Editor, Kentucky Medical Association, 3532 Ephraim McDowell Dr., Louisville, Kentucky 40205. Communications should not exceed 250 words. The right to abstract or edit is reserved by the editors of the *Journal*. Names will be withheld upon request, but anonymous letters will not be accepted.

To The Editor:

I am angry! I have waited two weeks before writing this response to an article in the *Courier Journal,* so that my response will be rational and not at a "gut" level. I am referring to the story on the study by Dr. Don Thomas concerning emergency room care. The implication was that one was taking their life in their own hands by going to a rural emergency room. As a U of L graduate, I know Dr. Thomas and Dr. Hicks. Neither are noted for his tact, but I did not expect a study which was anecdotal and libelous from them. In the article, they site specific cases in which patient's were mishandled by ER physicians in rural emergency rooms. There is no mention of how many serious or life threatening emergencies were handled in these individual emergency rooms and what their outcome was. As a university study, it should accord private physicians the same courtesy that would be accorded a new drug or therapy. No one accepts anecdotes about these.

It is very hard to work in an area where there are not a multitude of specialists looking over your shoulder and helping you make decisions. You can call them, but in the final analysis, it is your decision as to whether or not the patient needs a particular treatment or transfer. It is hard to be in a position where a neighboring physician competes with chiropractors to advertise on the radio. The one group you should be able to count on, the university from which you graduated, views you as a doctor waiting to dump on them. We are under attack by the public, by third party payers, by other health professionals and by the government. These groups do not need help from Dr. Thomas and those at his ilk.

The anecdotes are a two way street. I have referred a patient to the University of Kentucky, at the patient's request, for retained products of conception. She was told that she had a bladder infection, and that she should find a physician who knew what he was doing. Subsequently, she became septic and required a D&C and two weeks hospitalization. As a resident, we kept a severe COPD case going for 1½ years while keeping her off a respirator. By mistake, an ambulance took her to General Hospital where she was placed on a respirator. They were unable to wean her and she died of pulmonary infection two months later without leaving the hospital.

I did not write this response to air my laundry in public, because as a physician, everyone else does it for us. We should not "cover" for each other, but as competition increases, there will be a tendency to "witch hunt." This must be avoided. If Dr. Thomas wants to do more than grandstand for the newspapers, then I recommend that he do a scientific study of rural emergency rooms, find weaknesses, and then design a program that corrects these. Bring it to us as many rural physicians are in solo practice and we cannot leave on a whim.

Our emergency room has handled GSW's, MI's, boating accidents, eight-month-old babies with fractured skulls and subdural hematomas, bacterial meningitis with seizures in a two month old *ad infinitum.* I know of none that were improperly treated, (many treated fully in the house and some requiring transfer.) We do not deserve the disdain of our supposed colleagues and will not tolerate another smear by a fellow physician. We are not nameless idiots forced into exile. We chose rural practice. Our hospital has residency graduated, board certified physicians with training at the University of Louisville, Mayo Clinic, and Memorial Sloan Kettering Cancer Center. We are proud of our hospital and our work. By encouraging patients to bypass our facility and go elsewhere, precious time may be lost. Some individuals may practice poor medicine, but we do not. Dr. Thomas and the *Courier Journal* have done patients a disservice by encouraging them to bypass us.

Richard S. Miles, M.D.
Russell Springs, Ky.

SPECIAL ARTICLE

PUBLIC LAW 97-248

The Medicare Rationing Act of 1982

George F. Brockman, M.D. and William C. Parrish

SEEK not in legislative annals for this legislation under the subtitle given above. The Congress debated and adopted it under the longer and more euphonious title as "The Tax Equity and Fiscal Responsibility Act of 1982." The six o'clock news more pithily called it "The Reagan Tax Bill."

We have adopted the present subtitle to designate 10 provisions of the law that pertain to Medicare. These deserve serious study, because they project great problems for Medicare patients, all community hospitals, and every member of the Medical Staff of these hospitals.

Many of us, as well as organized medicine generally, developed a poor public image in 1964 by fighting the adoption of Medicare down to the wire. Despite our prescient projections of over-utilization and excessive costs, the Congress in its wisdom adopted Medicare Part A. This was a fairly straight-forward hospital insurance coverage of a reasonable standard type for the period. For services to persons over age 65, hospitals would be repaid approximately their usual and customary charges. The beneficiaries were liable for comparatively modest payments for co-insurance and deductibles. It differed from commercial hospital insurance, in that the government exerted its sovereign powers and forced the hospitals to accept Medicare payments as payment in full, limiting hospitals' total recovery from a Medicare patient.

The program worked too well, as we predicted. In 1965, the last pre-Medicare year, the average length-of-stay in hospitals was 7.8 days and there were 26,463 admissions. By 1970 average length-of-stay had shot up to 8.2 days and admissions to 29,252. In 1970, after three full years of Medicare, the Federal Government's health care expenditures totaled $28 billion. In 1980, the total was over $90 billion a year.

By 1975, cost containment had become a part of our vocabulary as succeeding administrations and Congresses were adopting ever more restrictive Medicare benefits, with less than satisfactory results for both health care providers and patients. Spurred by Health and Human Services (HHS) Secretary Schweiker's identification of the present Medicare program as a cost-plus operation, Congress cut the Gordian knot of Medicare cost and service growth by the passage of Public Law 97-248 in August. When signed into law by President Reagan on September 3, 1982, this act ushered in immediately an era of the most severe spending cuts in the history of the Medicare program, and, more ominously schedules the adoption of further legislation in 1983 which will completely change Medicare as we have known it heretofore.

A payment on per-case hospital admission is planned that bears little resemblance to hospital insurance as we have known it. Because the changes involve both the present and the future, it is most difficult to summarize this complex law.

Changes in Fiscal Year 1983

Table I summarizes briefly the Medicare impact of this complex law. The impact of most of these items is diffused, involving essentially bookkeeping and accounting changes that are of importance to hospital administration, but comparatively little importance to physicians. Nonetheless, it is estimated that these changes will save the government $13.3 billion in the next three fiscal years. "Save the government $13.3 billion" should be read, "cost the physicians, hospitals, and other providers."

The most significant impact on hospital solvency, the quality of patient treatment, and physician participation are a cost-per-case payment system and a new Section 223 limit. In implementing these, hospitals will be grouped into classes of like characteristics in terms of size, geographical location, patient mixes, and other factors. Each Medicare patient will be categorized under one of a set of diagnostic rubrics to be established by HHS. The average length-of-stay and the cost of treatment for each rubric will be calculated for each group of hospitals. Payment for each admission will be factored on the norm for each diagnosis for the group of hospitals.

In addition, each hospital will have a cost-per-case limit which will result in each hospital having a case "target," derived from that hospital's actual Medicare cost-per-case in FY 1982, plus an adjustment for inflation, to be determined by the Health Care Fi-

Table I
SUMMARY OF PROVISIONS OF PUBLIC LAW 97-248
WHICH AFFECT HOSPITALS
(Tax Equity and Fiscal Responsibility Act of 1982)

	Federal Savings in Millions		
	1983	1984	1985
Nursing Differential:	$ 95	$ 110	$ 125
Refinement of Professional Standards Review Organization Program:	15	15	20
Interest Charges in Overpayments and Underpayments:	25	25	20
Elimination of Private Room Subsidy:	54	75	80
Delay in Periodic Interim Payment:	750	100	
Increased Cost Report Auditing by Medicare Intermediaries:	130	300	300
Utilization Review Reduction in Length-of-Stay and Ancillary Utilization:	330	335	440
Elimination of Hill-Burton Free Care as a Medicare Allowable Cost	15	17	20
Disallowance of Anti-Union Organizing Activities:		(Unavailable)	
Limitation on Reimbursement to Radiologist and Pathologist and Other Hospital-Based Physicians in General:	160	210	250
New Section 223 Limits and Cost-per-Case Program:	480	1,770	3,770
Total Savings	$2,054	$2,957	$5,025

Table II. Determination of Cost-Per-Case Limits for Muhlenberg Community Hospital.

1982 Medicare Cost (est. $2.46 million) 1982 Medical Admissions (est. 1,656)	=	$1,485 cost-per-case
1982 Cost-Per-Case + 7.9% for 1983 increase in costs	=	1,602 1983 cost-per-case limit

nancing Administration. This adjustment has been set at 7.9% for FY 1983. The effect of the cost-per-case method is that the hospital will be paid a flat fee for each admission under a given diagnostic rubric, and will be free from any incentive to profit from the use of increased length-of-stay or ancillary services for Medicare patients.

Incentives are included to stimulate hospitals to reduce their own cost-per-case current cost. A hospital which saves expenses in relation to its cost-per-case limits is rewarded with 50% of the difference. A hospital which exceeds its cost-per-case limit is penalized 75% of the excess in the first year and 100% of the excess in the subsequent years. Thus, hospitals will receive essentially no reimbursement for costs in excess of the cost-per-case limit.

It is quite obvious that any hospital over 50 beds admitting Medicare patients will shortly be turning this year to their Medical Staff for assistance in maintaining solvency. Squeezed between declining reimbursement for Medicare patients and the increasing costs of labor, supply cost inflation, and the advancing cost of technology, cutting expenses incurred in the treatment of inpatients will be one of the few areas in which hospitals can recoup.

Public Law 97-248 goes on to expand the old Section 223 limitations on reimbursement to include routine and ancillary costs in the new Section 223 cost-per-case limit. Thus, a hospital is compared against other hospitals in the same geographic area according to bed size and function. A hospital can meet its own cost-per-case target but still lose reimbursement because it exceeds the Section 223 cost-per-case limit. See Tables I and II for examples of how this reimbursement noose works.

We have dealt this long with the "interim" provisions of P.L. 97-248 because of still one other provision of this enactment. The Secretary of HHS is directed to prepare for Congress by January 1, 1983, proposed legislation to permanently replace prospective reimbursement of hospitals. Mordant Washington observers feel that the Secretary of HHS has already drafted that legislation and that it awaits only approval by the Office of Management and Budget, which must screen his proposal before it is submitted to the Congress. One observer said, "Anything with savings they like This system is very flexible in the regard that you can tighten the screws or loosen the screws." Ominous words for our future.

Rationing Medical Care

The voluntary community hospital will be turning to the Medical Staff for stratagems to maintain solvency as the Congress and HHS progressively turn the P.L. 97-248 screw to reduce Medicare payments. Few community hospitals have the option of refusing Medicare patients because of inherent commitment to full community service or because of Hill-Burton obligations. They are faced with inevitable cost increases through inflation in their cost of labor, supplies and technology while reimbursement is declining. They must turn to the Medical Staff, to shorten length-of-stay, decrease the use of ancillary services, and avoid expensive technology for Medicare patients. This will be the rationing of medical care.

Consider the Medicare patient with an acute myocardial infarction who had developed complete heart-block with a pulse of 28, and is deteriorating despite optimal drug therapy. These are the classic indications for the insertion of a pacemaker. The pacemaker will increase the hospital bill from $2,500 upward. If the patient is treated in July 1982, the pacemaker will become imbedded in the historial cost of the treatment of myocardial infarction, for the purposes of Public Law 97-248.

If an identical patient is treated with the cost-per-case payment mechanism in place, the hospital can improve its solvency appreciably if the patient is **NOT** given the pacemaker. In this event, the hospital's cost of treating this case of myocardial infarction will be reduced, and the hospital will thus appear to HHS as more "efficient and productive." If the patient dies promptly for lack of the pacemaker, the hospital will receive the appropriate payment for the full treatment of a case.

Who denies this patient the pacemaker? Congress and the Secretary of HHS have refused to accept this onus. Does the hospital make it, by administrative fiat, with rules limiting expensive technology in Medicare patients? Does the Medical Staff establish such a policy? Or is the cardiologist expected to compromise his judgment to protect the financial stability of the hospital as a greater community good. As Victor Fuchs asked in his book by the same title, *Who Shall Live?*.

Table III. Application of Incentives, Penalties, and Section 223 limits.

Example 1.	Target limit	$1,602
	Actual cost-per-case limit 1983	1,572
		$ 30
	The Hospital has beaten its target by $30 per case. Now it must be compared against Section 223 limits to see if it is eligible for 50% of the $30 savings on each Medicare case.	
Example 2.	Hospital's target limit	$1,602
	Section 223 limit	1,547
		$ 55
	The Hospital has exceeded its Section 223 limit and is not eligible for incentive payment. In fact, since the Hospital cannot exceed its Section 223 limits, the Hospital will suffer a penalty.	
Example 3.	Hospital's target limit	$1,602
	Section 223 limit	1,547
		$ 55
	1983 penalty of 75% of excess*	$41.25
	Reimbursement denied ($41.25 times 1,656 admissions)	$68,310

*In 1984, 100% of the excess is non-reimburseable

Salient provisions of the Tax Equity and Fiscal Responsibility Act of 1982 (P.L. 97-248) as it applies to hospital payment for the care of Medicare patients are analyzed. The authors conclude that this law inexorably points to rationing of care to Medicare inpatients by developing a second and inferior tier of care. In conformance with the Journal's full disclosure policy, the senior author (GFB) declares his double concern as a physician and as a Medicare beneficiary.

AUXILIARY



Ellen C. Sklar

"We join hands to send you Seasons Greetings and to help tomorrows physicians in school today." This simple statement followed by a listing of contributors to American Medical Association Education and Research Foundation is on the inside of a Holiday Sharing card. The outside of the card is usually designed by a member of the auxiliary or of the medical society in some cases. These cards are sent in many counties to all members of the medical community in lieu of regular greeting cards and serves two purposes: one—they raise money for AMA-ERF and two—the cards send holiday greetings to all. Money is also raised by auctions, bake sales and in other innovative ways, too numerous to mention. In 1981-1982, $33,375.08 was raised for AMA-ERF through the Kentucky Auxiliaries and we are proud of this endeavor! Boyd County received an award for the highest amount per capita in the Southern Region of the United States and AKMA received an award for the second highest amount per capita in the Southern Region.

Doctor Donald R. Kmetz, Dean of the University of Louisville School of Medicine and Doctor D. Kay Clawson, Dean of the University of Kentucky College of Medicine were kind enough to explain how the contributions are used at the respective medical schools.

The following relates to the University of Kentucky:

"The AMA-ERF which supports student programs and activities at the University of Kentucky College of Medicine helps to enrich student life. I am sure that the KMA Auxilians will be pleased to learn the funds they provide to the College help to support 13 distinct student organizations. AMA-ERF contributions are utilized by Alpha Omega Alpha, our student academic honor society, to secure an eminent speaker to present the Student Research Day lecture. Our Medical Student Association, which includes virtually all students, presents a variety of programs including Awards Day, the Film Series, and MECO program. We use part of the AMA-ERF Award to pay for actors who simulate certain illnesses as a highly innovative way of teaching aspects of medical diagnosis to our second year students. The Family Practice Club uses their portion of the funds to assist representatives to travel to regional and/or national meetings of the Academy of Family Practice whereas the History of Medicine Society and Markesbery Society (Journal Club) secure guest speakers and help defray expenses of formal presentations by the student members. Our Organization of Student Representatives is enabled to participate in regional and national meetings of the Association of American Medical Colleges. The Fund helps defray a portion of operating expenses for such groups as Phi Delta Epsilon, Spouses of American Medical Students and the Student National Medical Association. Finally, AMA-ERF funds enable students who have demonstrated good research skills through our Student Summer Fellowship Program to present the results of their projects at regional and national meetings.

"The AMA-ERF contribution made possible by the efforts of the AKMA touches each of our students

directly or indirectly. The funds add a dimension to our educational effort that enables many students to use their didactic preparation in highly creative ways and thus to enhance their professional growth."

The following relates to the University of Louisville:

"Research has always been a major and fundamental mission of the University of Louisville School of Medicine. The individual departments of the School (14 clinical, five basic science) are involved in a wide variety of research projects. In the past, funding for research has relied extensively on federal funding; however, the present state of the economy has resulted in substantial cuts in all areas of the federal budget, including funding for research. In a time of increasing costs and dwindling government support, private sources of funding such as the AMA-ERF have become increasingly important to the School of Medicine.

"Last year's fund raisers, sponsored by the Medical Auxiliary, which raised money for AMA-ERF, resulted in a generous contribution to the School of Medicine. The bulk of these funds was used to assist our students by providing support for activities such as the Student Summer Research Program.

"In 1981-1982, the AMA-ERF contribution helped to defray part of the expenses for approximately 35 students involved in summer research projects in laboratories within the School of Medicine. The Summer Research Program provides the support for a student to work with faculty preceptors on a project of mutual interest. The results of these investigative efforts are presented and judged at the annual Health Sciences Center Research Day. Winners of the competition are provided travel funds to enable them to present their research findings at scientific meetings.

"Quite frequently, publication results from the student faculty research. Such publications enhance the reputation of the School, the faculty and the student. Preliminary data and/or publications resulting from the research may assist faculty in securing grant funding for future projects. Thus, the faculty, as well as the students, benefit from the collaborative efforts.

"The modest stipend each student received was welcome assistance in meeting the costs of a medical school education. Of equal importance, early exposure of medical students to research experience may serve as an incentive for them to pursue careers in academic medicine. The need for first-rate scholars on medical school faculties is obvious if we are to produce well-trained medical school graduates. In recent years, fewer and fewer medical school graduates have chosen to follow careers in academic medicine. Anything that can be done to reverse this trend will be welcomed by medical school administrations. If these Summer Research experiences do nothing more than create an interest in academic medicine, it is money well spent.

"Since many of our students depend on summer earnings to defray a portion of their medical school expenses, we must keep the stipends at a competitive level, so that students with a genuine interest in research are not forced to seek other earning opportunities during the summer. The need to increase stipends and the increasing costs of maintaining research laboratories make our costs greater each year. At the same time, government funding for such programs and funds available for students loans continue to decrease. In order to maintain the quality of our programs, and develop new programs in the future, new sources of funding must be identified. Without the help from organizations, such as the Auxiliary to the KMA, we would be unable to continue our programs at the current level.

"The University of Louisville School of Medicine is indebted to the Auxiliary for its past support. The continued efforts of the organization on behalf of medical education are sincerely appreciated by most students, faculty and administration of the University of Louisville School of Medicine."

Auxiliaries throughout the Commonwealth of Kentucky will continue to support the medical schools and we ask that you join us by donating to AMA-ERF. It is a simple process and may be accomplished through your spouse or through your medical society; enclose a check and also the name of the medical school of choice. Your contribution along with ours will be applied to the areas of the greatest need and is so significant with the decreasing support from state and federal sources. Join us in helping the medical schools in Kentucky or your alma mater—what could be more beneficial!

Ellen C. Sklar (Mrs. Allen), President
Auxiliary to the Kentucky Medical Association

ASSOCIATION NEWS

Joe D. Miller Cited AMA's Layman for Distinguished Service



Joe D. Miller

Joe D. Miller, a 26-year veteran and innovator at the AMA, was awarded the prestigious Citation of a Layman for Distinguished Service during the AMA Interim Meeting of the House of Delegates in December. The Citation was awarded to Miller, "In recognition of more than 33 year's service to medicine and the advancement of its professional goals . . ."

Miller, whose retirement was announced in November, has been the highest-ranked layman in the Association's history with the title Senior Deputy Executive Vice-President. He joined the staff of AMA in 1957 and served as the first Executive Director of the American Medical Political Action Committee. Miller is considered to be the founder of the corporate political action movement in the U.S. He also had a leading role in the planning for publication of foreign language versions of the *Journal of AMA*.

Miller is a native of Smiths Grove, Kentucky and a graduate of the University of Kentucky. In 1978, he was presented KMA's Outstanding Layman Award.

Upon his retirement, Miller will begin assignments as consultant to the AMA and other associations.

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IN MEMORIAM

WILLIAM H. HOSBACH, M.D.
Paducah
1930-1982

William H. Hosbach, M.D., a surgeon in Paducah for 19 years, died on November 3, 1982. Doctor Hosbach was a fellow of the American College of Surgeons and Southeastern Surgical Society Association. A native of Waverly and a 1956 graduate of St. Louis University in St. Louis, Missouri, Doctor Hosbach was a member of the C. Rollins Hanlon Surgical Group, American Medical Association, McCracken County Medical Society and had been a member of KMA since 1964.

PHILIP C. BROOKS, M.D.
Hopkinsville
1900-1982

Philip C. Brooks, M.D., a family practitioner in his hometown of Hopkinsville, died November 28, 1982. He had been in practice for 56 years and had maintained his own hospital for more than 35 years. Doctor Brooks was a 1927 graduate of the Howard University School of Medicine and had been a member of the Kentucky Medical Association since 1969.

RONALD O. NASER, JR., M.D.
Brandenburg
1929-1982

Ronald O. Naser, Jr., M.D., a general practitioner in Brandenburg, died November 20, 1982. A 1955 graduate of the University of Louisville School of Medicine, Doctor Naser had been a member of the KMA since 1958.

JOSEPH H. LIEBMAN, M.D.
Frankfort
1910-1982

Joseph H. Liebman, M.D., a retired obstetrician from Frankfort, died in November. He was a graduate of the University of Louisville School of Medicine in 1936 and had been a member of the KMA since 1952.

MAURICE F. RABB, M.D.
Louisville
1902-1982

Maurice F. Rabb, M.D., a retired anesthesiologist in Louisville, died November 10, 1982. Doctor Rabb was a graduate of the Meharry Medical College and had been a member of the KMA since 1954.

JAMES E. ALBRITTON, M.D.
Mayfield
1914-1982

James Edmund Albritton, M.D., a general practitioner from Mayfield, died September 24. He was a 1939 graduate of the University of Louisville School of Medicine and had been a member of KMA since 1952.

DARREL E. RAINS, M.D.
Hopkinsville
1939-1982

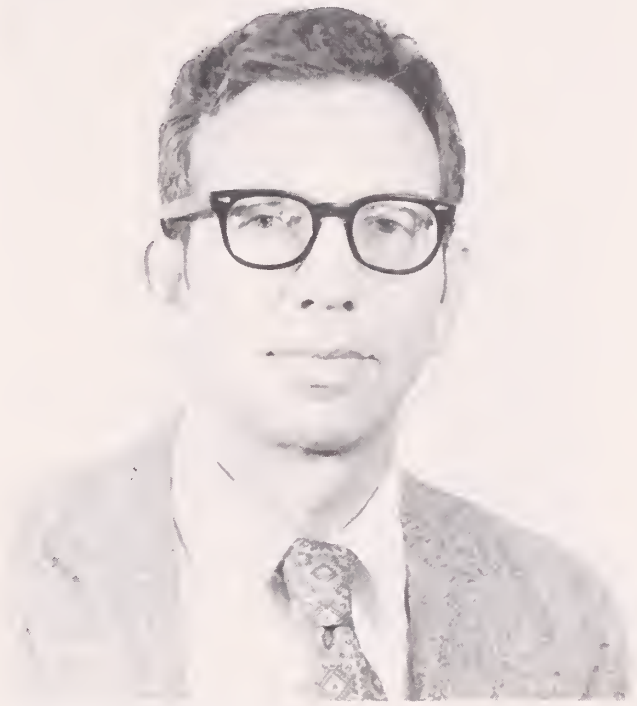
Darrel E. Rains, M.D., of Hopkinsville died October 20. Doctor Rains was a psychiatrist and had been a member of KMA since 1975.

Competition In Medicine

Unless physicians recognize the changing trends on the supply and demand sides of health care economics and take appropriate actions, they will see their incomes and influence decline. Physicians must compete in an economic sense and go with the trends. "You can't hang back." Physicians are the most knowledgeable purchasers in the health care market, and it would be better if they would make their own decisions on conserving dollars.

THE TURNING POINT

March 16-17, 1983



Paul Feldstein, Ph.D.
Ann Arbor, Michigan

MEMBERS IN THE NEWS

David H. Neustadt, M.D., rheumatologist and clinical Professor of Medicine University of Louisville School of Medicine, was installed as President of the American Rheumatism Association Central Region during its annual meeting in Chicago, Illinois, November 5-6, 1982.

Hiram C. Polk, Jr., M.D., Chairman of the University of Louisville School of Medicine's Department of Surgery, has received the 1982 Seale Harris Medal by the Southern Medical Association. The medal is a means of recognizing individual contributions to accomplishments in clinical research. Doctor Polk received his medical degree from Harvard School of Medicine in 1960 and began teaching at the University of Louisville in 1971. He is a past president of the Society of University Surgeons and Association for Academic Resources, and a member of several editorial boards including the *British Journal of Surgery* and the *Journal of Clinical Surgery*.

Postgraduate Opportunities

JANUARY

8-9 14th Bethesda Conference, American College of Cardiology's Heart House, Bethesda, MD

8-14 Steamboat Springs, Colorado, Current Concepts in Pain Management. INFO: D. Berman, M.D., Program Director Current Concept Seminars, 3301 Johnson Street, Hollywood, FL 33021

8-16 Medical Updates IV: A Review of Recent Advances in Medicine, Quillen-Dishner College of Medicine, Marriott's Mark Resort, Vail, CO

17-21 14th Annual Cardiovascular Conference conducted by the American College of Cardiology and the Santa Barbara Heart & Lung Institute, Snowmass, CO

20-30 Winter Congress International Body Imaging Conference, St. Moritz, Switzerland

21 Seminar on Forensic Medicine, Quillen-Dishner College of Medicine, East Tennessee State University, Johnson City, TN

23-26 American Society for Parenteral and Enteral Nutrition, 7th Clinical Congress, Sheraton Washington Hotel, Washington, D.C.

31-4 Digital Radiography 1983 National Symposium, The Diplomat Resort & Country Clubs, Hollywood, Florida

FEBRUARY

East Tennessee State University, School Health V, Johnson City, TN

20-25 14th Family Medicine Review—Session I, Hyatt Regency Hotel, Lexington

23-1 Hurly Medical Center, Adolescent/Young Adult Medicine, Wailea Beach Hotel, Maui, Hawaii

24 School Health V: Children's Problems with Schools, Quillen-Dishner College of Medicine, East Tennessee State University, Johnson City, TN

28-4 Steamboat Springs, Colorado, Current Concepts in Pain Management. INFO: D. Berman, M.D., Program Director Current Concept Seminars, 3301 Johnson Street, Hollywood, FL 33021

28-4 Annual Meeting of the United States—Canadian Division of the International Academy of Pathology, Atlanta Hilton, Atlanta, GA

MARCH

1-4 The University of Texas System Cancer Center, "Cancer Invasion and Metastasis, 36th Annual Symposium on Fundamental Cancer Research, Shamrock Hilton Hotel, Houston, TX

7-9 NIH Consensus Development Conference, Critical Care Medicine, Masur Auditorium, Warren Grant Magnuson Clinical Center, National Institutes of Health, Bethesda, Maryland

11-13 Advanced Cardiac Life Support Provider/Instructor Course, University of Kentucky Medical Center, Lexington

18-20 Southern Medical Association, Medical Staff Leadership Seminar, Sarasota, Florida

20-24 32nd Annual Scientific Session of American College of Cardiology, New Orleans, LA

31-1 12th Annual Medical Aspects of Sports Symposium: Prevention & Treatment of Athletic Injuries, Hyatt Regency Hotel, Lexington

APRIL

East Tennessee State University, Orthopaedic Operating Room Nurses: Implants and Instrumentation Techniques, Johnson City, TN

11-14 64th Annual Session of the American College of Physicians, Moscone Center, San Francisco, CA

15-16 Frontiers in Endocrinology and Metabolism, Hyatt Regency Hotel, Lexington

18-29 24th Postgraduate Institute for Pathologists in Clinical Cytopathology, The Johns Hopkins University School of Medicine, Baltimore, MD

21-23 Diagnosis and Treatment of Common Human Tumors, Hyatt Regency Hotel, Lexington

21-23 High Risk Pregnancy, Seelbach Hotel, Louisville

22-24 Southern Medical Association, Medical Staff Leadership Seminar, Hilton Head, South Carolina

MAY

6-8 Southern Medical Association, Regional Postgraduate Conference, Lexington, KY

19-21 American Cancer Society, National Conference-Breast Cancer-1983, Boston Sheraton Hotel, Boston, Mass.

19 Allergy & Immunology, Seelbach Hotel, Louisville

20-21 Vitrectomy Workshop, Health Sciences Center, University of Louisville

22-27 14th Family Medicine Review—Session II, Hyatt Regency Hotel, Lexington

26-28 Adolescent Gynecology, Seelbach Hotel, Louisville

JUNE

2-3 Genetic Aspects of Common Genetic and Malformation Disorders, Hyatt Regency Hotel, Lexington

2-4 1st Symposium on Behavioral Neurology: Higher Cortical Functions and the Brain, Vanderbilt University School of Medicine, Nashville, TN

8-10 12th Update in OB-GYN, Hyatt Regency Hotel, Lexington

8-10 Eighth Annual Conference on Clinical Application of Hyperbaric Oxygen, Memorial Hospital Medical Center, Center for Health education, Long Beach, California

9-10 Southern Medical Association, Medical Malpractice Seminar, Houston, Texas

12-17 Family Medicine Review, Seelbach Hotel, Louisville

16-17 Southern Medical Association, Medical Staff Leadership Seminar, Kansas City, Missouri

The Future of Computers in Physicians Offices

In the next decade, the computer will become as important a tool as the stethescope in patient management. Five years ago, 19% of physicians were using some type of computer for clinical as well as practice management applications. Today that figure is 30% and growing.

THE TURNING POINT

March 16-17, 1983



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The Future of Organized Medicine

Problems facing the medical profession include . . . limited resources . . . medical . . . legal . . . ethical . . . political. They challenge our conscience . . . our judgment . . . and we have responsibility to face up to these tasks. A strong unified voice to speak and a highly capable organization to act will be crucial to the survival of the professional and patients freedom of choice.

THE TURNING POINT

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Edward A. Annis, M.D.
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- Contraindicated in patients who are pregnant or hypersensitive to flurazepam.
- Caution patients about drinking alcohol, driving or operating hazardous machinery during therapy.



References: 1. Kales A *et al: J Clin Pharmacol 17*:207-213, Apr 1977 and data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Kales A: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **4.** Kales A *et al: JAMA 241*:1692-1695, Apr 20, 1979. **5.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 15, 1978. **6.** Kales A *et al: Clin Pharmacol Ther 19*:576-583, May 1976. **7.** Kales A, Kales JD: *Pharmacol Physicians 4*:1-6, Sep 1970. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Dement WC *et al: Behav Med 5*:25-31, Oct 1978. **10.** Vogel GW: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **11.** Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington, DC, May 3-7, 1971. **12.** Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytime sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. **13.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

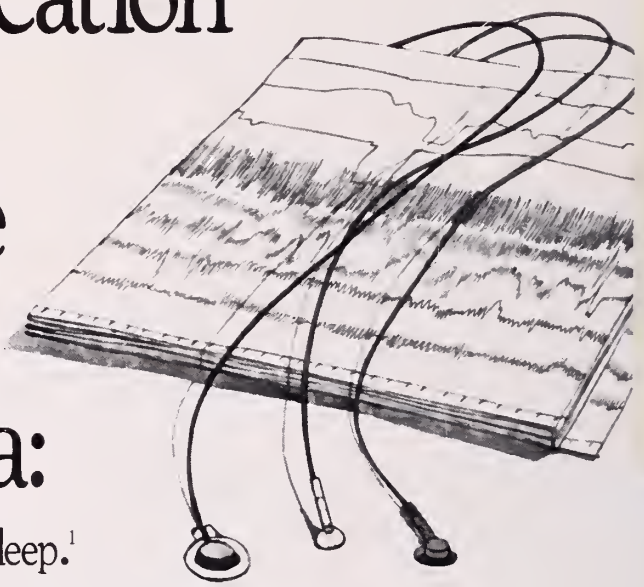
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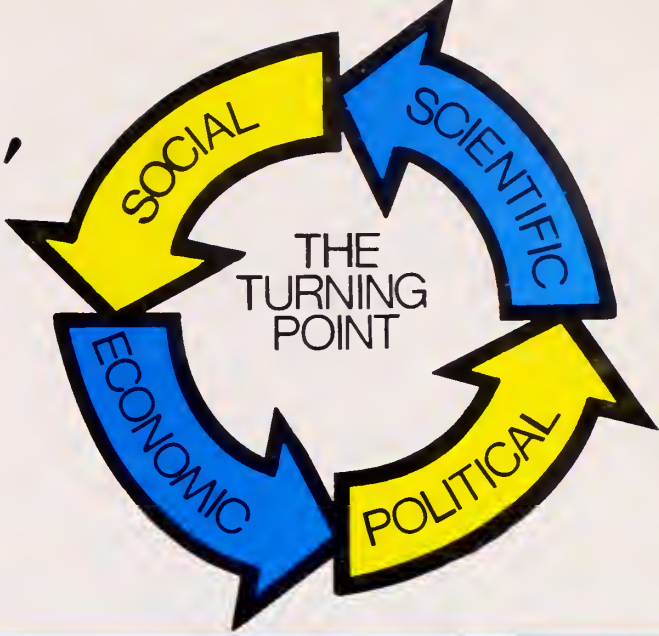
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STACKS

"The Turning Point"

See page 118



WIP
vol. 81 #2

The Journal Of The Kentucky Medical Association

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MAR 1 1982

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Reference: 1. Sheu YS, Ferguson JA, Cooper JR: *Evaluation of the Abuse Liability of Diethylpropion, Phendimetrazine, and Phentermine,* unclassified document, ADAMHA, HHS. Office of Medical and Professional Affairs, NIDA, 1980, pp 10–15.

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Please see brief summary of prescribing information on the next page.

A Brief Summary
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INDICATIONS AND USAGE: Melfiat® 105 (phendimetrazine tartrate) is indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class (See CLINICAL PHARMACOLOGY) should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, symptomatic cardiovascular disease, moderate to severe hypertension, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors (hypertensive crises may result).

WARNINGS: Tolerance to the anorectic effect usually develops within a few weeks. When this occurs, the recommended dose should be discontinued. Phendimetrazine tartrate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly.

Drug Dependence: Phendimetrazine tartrate is related chemically and pharmacologically to the amphetamines. Amphetamines and related stimulant drugs have been extensively abused, and the possibility of abuse of phendimetrazine tartrate should be kept in mind when evaluating the desirability of including a drug as part of a weight-reduction program. Abuse of amphetamines and related drugs may be associated with intense psychological dependence and severe social dysfunction. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high-dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG, manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxication is psychosis, often clinically indistinguishable from schizophrenia.

USAGE IN PREGNANCY: The safety of phendimetrazine tartrate in pregnancy and lactation has not been established. Therefore, phendimetrazine tartrate should not be taken by women who are or may become pregnant.

USAGE IN CHILDREN: Phendimetrazine tartrate is not recommended for use in children under 12 years of age.

PRECAUTION: Caution is to be exercised in prescribing phendimetrazine tartrate for patients with even mild hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of phendimetrazine tartrate and the concomitant dietary regimen. Phendimetrazine tartrate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage.

ADVERSE REACTIONS: Cardiovascular: Palpitation, tachycardia, elevation of blood pressure.
Central Nervous System: Overstimulation, restlessness, dizziness, insomnia, euphoria, dysphoria, tremor, headache; rarely psychotic episodes at recommended doses.
Gastrointestinal: Dryness of the mouth, unpleasant taste, diarrhea, constipation, other gastrointestinal disturbances.
Allergic: Urticaria.
Endocrine: Impotence, changes in libido.

OVERDOSAGE: Manifestations of acute overdosage with phendimetrazine tartrate include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states.
Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma. Management of acute phendimetrazine tartrate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Acidification of the urine increases phendimetrazine tartrate excretion. Intravenous phentolamine (Regitine) has been suggested for possible acute, severe hypertension, if this complicates phendimetrazine tartrate overdosage.

DOSAGE AND ADMINISTRATION: Since Melfiat® 105 (phendimetrazine tartrate) 105 mg is a slow release dosage form, limit to one slow release capsule in the morning. Melfiat® 105 (phendimetrazine tartrate) is not recommended for use in children under 12 years of age.

HOW SUPPLIED: Each orange and clear slow release capsule contains 105 mg phendimetrazine tartrate in bottles of 100. NDC 0063-1082-06.

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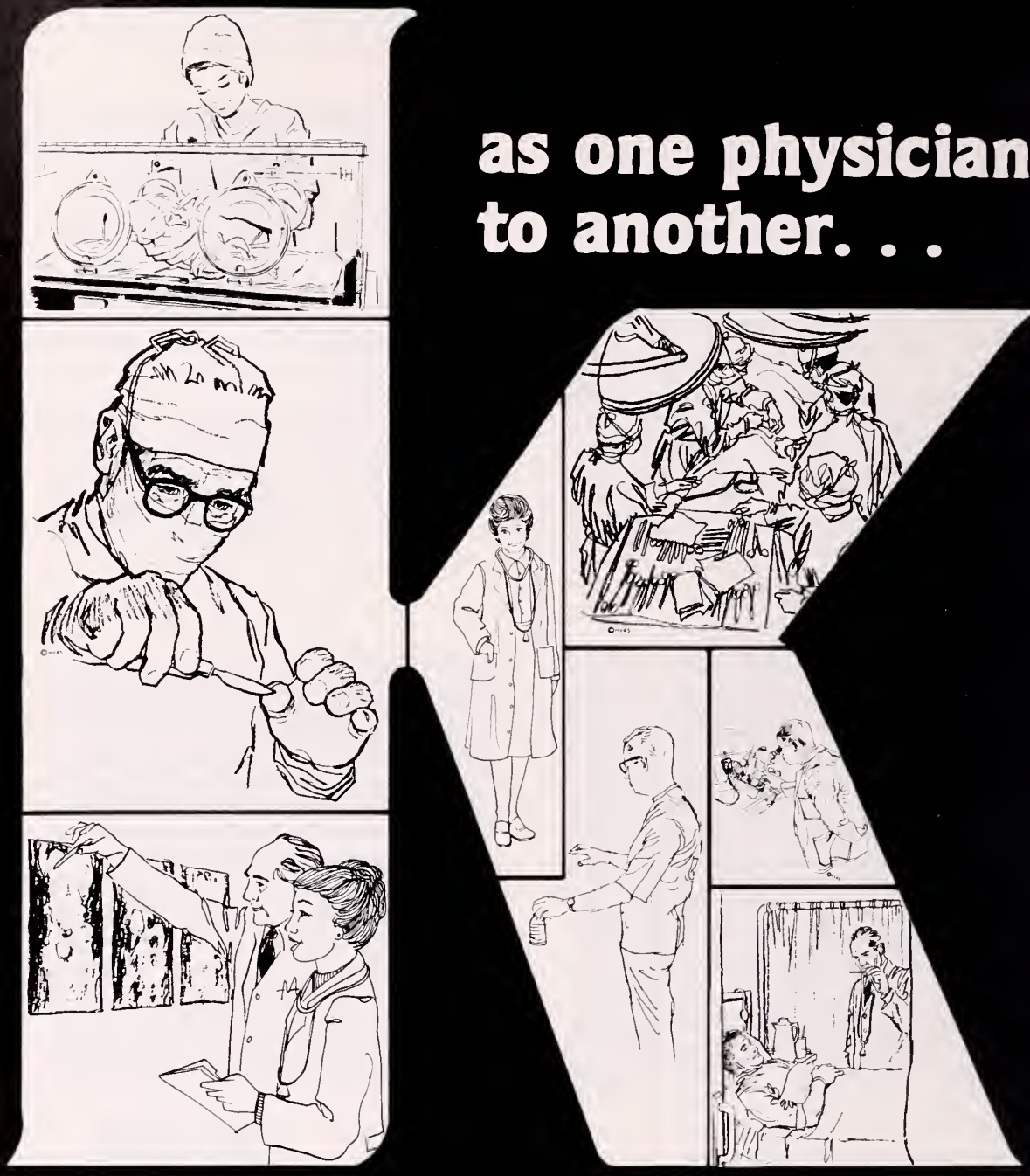
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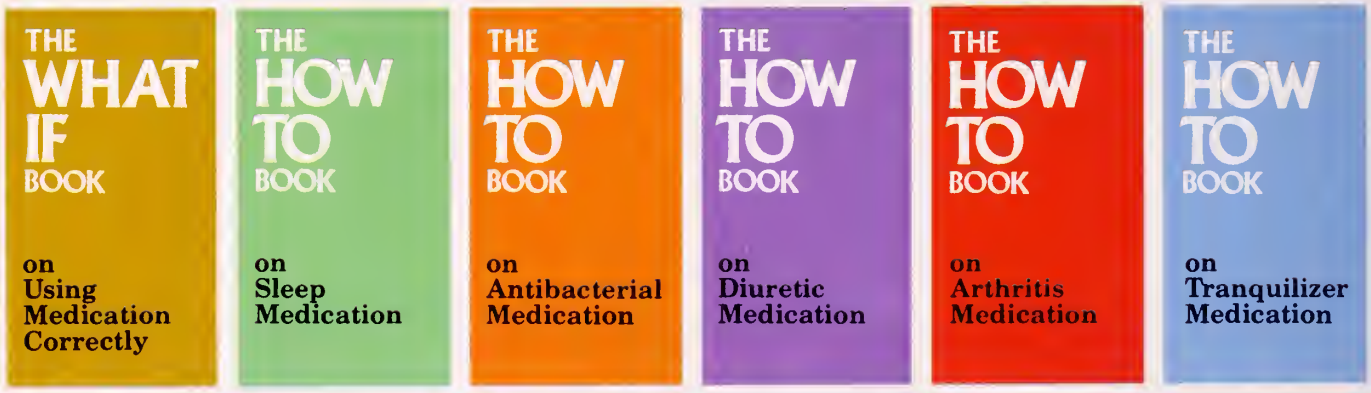
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The Turning Point

Writing my first article of the New Year, I would like once again to wish each of you the happiest and most productive of years. How fortunate we are that we still have some semblance of private and free enterprise in the profession we have chosen for our life's work. We must, however, stay "on our toes" or the very foundation is going to crumble from beneath us. The moles are digging under the walls while we play harlequins on center stage.

Medicine, as you are all aware, is in the midst of a tremendous upheaval that will tax our patience (patients) and ability to cope. A primary responsibility of KMA and its leadership is to alert and inform the membership of major economic, social, political and scientific developments. Those of us who have been on the board for the past five to six years have seen tremendous changes in the manner medical care has developed. While, in the past, most of the deviations have occurred in urban areas, many experts believe rural areas are ripe for becoming the focus for more dramatic innovations.

In order to keep information for you current, our ad hoc committee has put together a conference appropriately named **"The Turning Point."** The conference is designed to focus upon not only those innovations presently being utilized but also to prepare and explain future problems that can be expected. In addition, experts in these particular fields will be teaching the latest marketing strategies and the use of computers in medical practice. Another objective in presenting this program was to make it attractive not only for physicians but for their spouses as well. You have already received several mailings outlining speakers and accommodations and I want to encourage you to get your registrations in as space will be limited to the first 300 applicants.

The committee, through staff in the persons of Don Chasteen and Bill Applegate, have been fortunate in obtaining outstanding speakers who are nationally recognized and much in demand. Speakers such as Edward R. Annis, Ann R. Somers, John Velkins and Robert Novak are only a few of the participants and the rest are equally as well known and well versed in their particular fields.

We were most fortunate to have obtained $10,000.00 from KPRO, under the leadership of President Bob Burkhart, for the funding of some of these speakers. KMIC also has made available funds for the same purpose. On behalf of the Board of Trustees and staff and leadership of KMA, I want to extend a hearty thank you to these organizations for their support and help in this endeavor.

"The Turning Point" is a conference of national stature—it has been strategically planned and I can assure you will be well worth the small registration fee and the time you spend in attending it. Please get your application in before the spaces are all utilized.

Dwight L. Blackburn, M.D.
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SCIENTIFIC

Blindness After Closed Head Injury

RICHARD H. MORTARA, M.D. and JOHN W. GARDEN, M.D.

Two cases are presented in which comparatively minor head injury resulted in monocular blindness. One presenting with a linear type of skull fracture, the other with no skull fracture. A brief differential examination is presented and the pathogenesis of monocular blindness occuring after a closed head injury is discussed.

HISTORICALLY, references have been made from the time of Hypocrates that blindness may occur from blows to the frontal region without overt damage to the eye.[1] The initial feature of the blindness cannot always be observed accurately because of the period of unconsciousness which may have taken place or because of the rapidity in which the blindness occurred. The purpose of this report is to call attention to a combined neurosurgical and opthalmalogical problem occurring with some frequency following closed head injuries. The evaluation of traumatic blindness without apparent injury to the eye will be reviewed.

Case Reports

Case Report I. The patient is a 21-year-old well developed, well nourished white male involved in a motor vehicle accident on the day of admission to the hospital. On arrival to the emergency room, he was found to be combative with inappropriate verbal responses. The physical examination revealed stable vital signs and a normal general medical examination except for a hematoma and edema involving the right side of the face with the right hemotympanum. The right upper lid was swollen shut. The right pupillary reaction was non-reactive directly and the right pupil was larger then the left. The left pupil reacted directly, but not consensually (Marcus-Gunn pupil). Ocular motility was intact and facial sensory responses were unimpaired. The deep tendon responses were equal without pathological reflexes. A CAT scan was performed on admission which was completely normal (Fig. 1).Tomography of the right orbit and adjacent structures revealed fractures involving the orbital floor and a fracture line extending into the medial wall of the right orbit and ethmoidal sinus with a fracture extending posteriorly to the sphenoid sinus (Fig. 2). With observation, the patient progressively improved in mental status and facial surgery was subsequently performed. Approximately one month after the accident a repeat ophthalmological evaluation was performed revealing a visual acuity of no light per-

From the Good Samaritan Hospital, Lexington, Kentucky 40508. Reprint requests to Richard H. Mortara, M.D., 152 West Zandale, Lexington, Kentucky 40503.

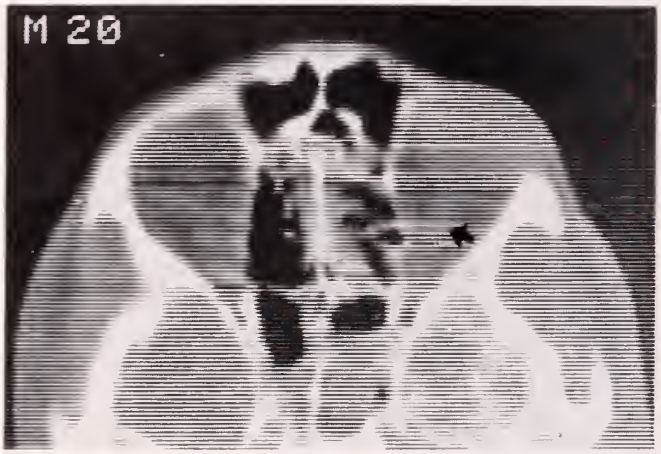


Figure 1: A. CT scan through the base of the skull. Arrow indicates right optic nerve intact. No obvious blood about the nerve.



B. CT scan representative of normal brain.

ception in the right eye with 20/20 vision and normal visual fields in the left eye. A Marcus-Gunn pupil persisted on the right. Again, motility and sensory findings were unremarkable. Fundoscopic evaluation revealed a pale, white optic nerve on the right with normal appearing on the left.

Case Report II. The patient, is a previously normal 24-year-old well developed, well nourished white male involved in a fork-lift accident. He presented with a large parietal scalp avulsion laceration involving the left ear. He was confused and moderately combative. He had a right hemotympanum and a right periorbital ecchymotic area present. The left pupil was noted to be larger than the right. Generalized motor and sensory examinations were normal. Deep tendon responses were equal and no pathological reflexes could be demonstrated. Skull x-rays and a CAT scan were performed on admission and were normal. It subsequently became apparent that the patient could not see from the left eye. Opthalmological consultation was requested and considerations given on roofing the left optic canal. The potential morbidity from this procedure is considered unjustifiable in view of its unproven value. The patient was placed on steroids without improvement of vision in the left eye. During his hospitalization, a CSF leak became apparent and the patient was treated with a Theco-peritoneal shunt. His subsequent course was that of a completely neurologically normal individual except that vision in his left eye did not improve. At his last examination he did not perceive light in the left eye, a Marcus-Gunn pupil on the left as well as a pale white left disc. His ocular motility and facial sensation were unimpaired.

Discussion

The pathogenesis and differential diagnosis of blunt intracranial trauma resulting in loss of vision has been well documented but has elicited controversy down through the years.[1,2,3,4] Injuries to the optic nerve can occur anywhere from the globe as the nerve exits through the sclera and passes through the orbit and optic canal to the chiasm. In these representative cases, a normal optic nerve followed by pale optic atrophy (primary optic atrophy) was observed. Thus, an avulsion of the optic nerve at the sclera had not occurred. The lack of proptosis, the lack of sensory or motility defects and the absence of fractures that would cause a rotation of bony fragments that could directly contuse the orbital optic nerve all mitigate against the orbital portion as the site of involvement. This leaves us with the intracanalicular portion.

Many explanations have been advanced to explain the intracanalicular injury to the nerve. Skull fractures were presented in as many as 64%



Figure 2: A. Fracture of the medial wall of the right orbit (arrow).



B. Fracture extending through roof of orbit and adjacent ethmoidal sinus.

but in only 6% was the fracture of the optic canal identified on the same side as the blindness.[1] Thus, the literature would suggest a definitive fracture of the optic canal is comparatively rare.[1] Hemorrhages into the sheath of the optic nerve have been considered as a probable cause in certain groups of cases.[2] Those patients showed partial optic nerve atrophy as well as partial recovery of vision. At present, high quality CAT scans should be able to inform us of compression of the optic nerve by bone or hematoma. Deformations of the orbit and the brain have been used as partial explanations to explain monocular blindness as well as chiasmal syndromes.[3,4,5]

In our representative cases as well as others, a fracture compressing the optic nerve was not noted on **routine** skull films nor was an abnormality seen on CAT scan. More recently, histopathological studies of a case of closed head injury noted to be blind in one eye revealed that a fracture could not be demonstrated radiologically even when the involved fragment was excised and x-rayed. Other proposals include traction by mobile intracranial structures on a relatively fixed intracanalicular portion of the optic nerve, resulting in a sheering of the pial vessels. Furthermore, the intracanalicular portion of the nerve showed ischemic necrosis but intact neural and meningeal architecture.[4] This case implies that pathogenesis of intracanalicular optic nerve injury is ischemic either from sheering of the pial blood supply or compression of the pial vessels against the bony canal by edemitous optic nerve resulting from a fracture.

Serious thought was given to performing a craniotomy to evaluate the optic nerves hoping that we would be able to correct monocular blindness. Considering the lack of plain x-ray findings and CAT scan findings in addition to recent cerebral trauma we did not feel surgery was indicated. Operative exploration had been undertaken under similar circumstances for acute unilateral blindness or delayed visual loss with either a unilateral or bilateral visual loss. Operative exploration did not result in recovery of visual loss or even improvement.[1,2] Until more definitive techniques can be delineated between a transient ischemic interruption of axioplasmic flow versus permanent infarction, therapeutic modalities or operative intervention must wait.

Acknowledgment

The authors would like to express our appreciation to Doctor Constance Fulmer, Director of Continuing Education, Good Samaritan Hospital, Lexington, Kentucky for her editorial review of this manuscript.

References **1.** Hughes B: Indirect injury of the optic nerve and chiasm. *Bull Hopkins Hosp* 111:98-116, 1962. **2.** Hooper RS: Orbital complications of head injury. *Br J Surg* 39:126-128, 1951. **3.** Davidson N: The indirect trauma of optic atrophies. *Am J Opthal* 21:7-21, 1938. **4.** Ramsay JH: Optic nerve injury in fracture of the canal. *Br J Opthal* 63:607-610, 1979. **5.** Gross, C, DeKock JR, Panje WR, Hershkowitz N, Newman J: Evidence of orbital deformations that may contribute to monocular blindness following minor frontal head trauma. *J Neurosurg* 55:963-966, 1981.

Multiple Myeloma Complicated by Enterococcal Endocarditis and Penicillin Allergy

GARY R. PLOTKIN, M.D., FACP

A patient is described with IgA myeloma and enterococcal endocarditis who had a previous type I hypersensitivity reaction to penicillin G yet tolerated the desensitization procedure and subsequent therapeutic administration of penicillin without local or systemic reactions. The immunologic interrelationships among multiple myeloma, bacterial endocarditis and penicillin allergy are discussed.

INFECTIONS, especially bacterial, are a leading cause of morbidity and mortality in patients with multiple myeloma; however, group D streptococci are rarely mentioned as etiologic agents.[1,2] Despite the common occurrence of bacteremias, endocarditis is seldomly encountered and perhaps is related to the inherent immunologic and hematologic abnormalities present in plasma cell dyscrasias. A patient is described with IgA myeloma and enterococcal endocarditis who had a previous type I hypersensitivity reaction to penicillin G yet tolerated the desensitization procedure and subsequent therapeutic administration of penicillin without local or systemic reactions. Prior to the desensitization procedure, therapeutic administration of penicillin and institution of chemotherapy, total serum IgE was not detected and benzylpenicilloyl-polylysine (PPL) RAST was negative. Following the administration of immunosuppressive agents and while receiving intravenous aqueous penicillin G, serum IgE level became elevated and PPL RAST positive. The immunologic interrelationships among multiple myeloma, bacterial endocarditis, and penicillin allergy are discussed.

Case Report

A 75-year-old man was hospitalized for evaluation of a six week history of fever and anemia and serial blood cultures grew Streptococcus faecalis (enterococcus). Cardiac examination at the time of admission was normal, but by the fourth day a grade III/VI murmur of aortic insufficiency was heard. M-mode echocardiogram showed a normal sized left ventricle and diastolic fluttering of the mitral valve consistent with aortic insufficiency. Immature plasma cells comprised approximately 40% of the nucleated cells within the bone marrow biopsy, multiple scattered radiolucencies were present on skull roentgenograms, and urine and serum immunoelectrophoretic and protein electrophoretic studies revealed a monoclonal IgA lambda pattern. Other laboratory data on admission included normal liver function, serum creatinine 1.4 mg/dl, hemoglobin 8.3 gm%, hematocrit 23.9%, white blood cell count 5500/cu mm, platelet count 163,000/cu mm, C_3 89 mg/dl (normal 83-177), C_4 25 mg/dl (normal 16-45), total CH50 complement 179 units/ml (normal 150-250), IgA 2910 mg/dl, IgG 560 mg/dl, IgM 44 mg/dl, no detectable serum immune complexes by Raji cell and Clq binding assays and negative rheumatoid factor, cryoglobulins and antinuclear antibodies. Renal ultrasonography and radiographic evaluation of the gastrointestinal tract were normal.

Three weeks prior to this admission the patient experienced generalized urticaria, dyspnea, and hypotension 20 minutes following the intramuscular administration of aqueous penicillin G, and therefore desensitization to this antibiotic was performed on the fourth day of hospitalization. Histamine prick-puncture and intradermal skin tests were positive; however, prick and intradermal tests to benzylpenicilloyl-polylysine (PPL) 6.0×10^{-5} M and concentrations of aqueous penicillin G up to 10,000 units/ml were negative. Penicillin desensitization procedure

From the Trover Clinic, Madisonville, Kentucky 42431

was uneventful, and the patient tolerated intravenous penicillin G without apparent adverse effects. Prior to chemotherapy and desensitization total serum IgE by RIA was < 3 U/ml and PPL RAST negative, and after a course of melphalan and prednisone, repeat IgE was 171 U/ml (normal 3-43 one S.D. range) and PPL RAST 319 units. These subsequent IgE and PPL RAST determinations were obtained during penicillin therapy. The patient improved clinically; however, he left the hospital against medical advice on the 24th hospital day.

Discussion

The pathogenesis of subacute bacterial endocarditis (SBE) remains controversial; however, one hypothesis focuses on the initial formation of a sterile platelet-fibrin thrombus on an endothelial surface (nonbacterial thrombotic endocarditis). The adherence of bacteria to these thrombi may be dependent upon the presence of circulating specific bacterial antibodies especially agglutinins, and contact between bacteria and platelets may result in further sequestration of large numbers of organisms within aggregated platelets.[3] Bacteria may either adhere passively to thrombi without prior interaction with circulating blood elements or alternatively bacterial agglutination with bacterial initiation of platelet clumping and phagocytosis of bacteremic organisms may be necessary for localization to the platelet-fibrin thrombus.[4] Microscopy of the vegetations in SBE have demonstrated neutrophils, lymphocytes, plasma cells, and frequently bacteria.[3] The immunologic phenomena characteristic of infective endocarditis include B-cell hyper-responsiveness as manifested by elevated rheumatoid factor, IgG, and IgM levels and presence of cryoglobulins, antinuclear antibodies, immune complexes and macroglobulins.[3,5,6] Loss of suppressor cell activity may also contribute to the hypergammaglobulinemia.[6]

Increased susceptibility to infections in multiple myeloma results from various defects involving both humoral and cell mediated immunities. Decreased serum concentrations of normal IgG, IgM and IgA reflect decreased synthesis and less significantly enhanced catabolism of immunoglobulins.[7] Inadequate immunologic response to antigenic stimuli with or without iow levels of serum complement is also a contributing factor.[8] Normal plasma cells and B-lymphocytes are decreased, and various data suggest that myeloma cells may secrete mitotic inhibitors which impair immunoglobulin synthesis by inhibiting B-lymphocyte proliferation or may release abnormal molecules of informational RNA that alter the expression of normal immunoglobulin receptors on B-lymphocytes.[9,10] Additionally, circulating phagocytic mononuclear cells in vitro suppress polyclonal immunoglobulin synthesis by co-cultured normal lymphocytes.[9] Heat-stable and heat-labile opsonic activity, lymphocyte phytohemagglutinin response, homograft rejection reaction, and neutrophil adherence, mobilization and phagocytosis may also be impaired in myeloma.[7,11,13]

Analogous to IgG synthesis, immediate hypersensitivity is dependent upon an immune response of IgE-producing cells to a specific antigen. An antigen interacts with macrophages, and T helper cells will respond to antigenic determinants and HLA components on the macrophage plasma membrane. Additionally, T helper cells will activate antigen specific B cells, and specific suppressor T cells which modulate the IgE immune response will be generated by the same antigen contact.[14] Patients with immediate allergic reactions to penicillin commonly have IgE antibodies against minor determinants, and occasionally benzylpenicilloyl (major antigenic determinant) specific IgE antibodies will be present.[15]

In light of the foregoing discussion, certain salient features are illustrated by this case report. Endocarditis may be uncommon in myeloma since normal plasma cells, functional antibodies, immune complexes, and cardiac platelet-fibrin thrombi are decreased or absent. Additionally, vegetations in SBE contain inflammatory cells, and the functions of these are abnormal in certain plasma cell dyscrasias. The negative skin tests to aqueous penicillin G and benzylpenicilloyl-polylysine plus the negative provocative challenge in this patient may have been explained by the lack of measurable IgE, the synthesis of which was suppressed by active myeloma dis-

ease. The subsequently elevated IgE and positive PPL RAST occurred after immunosuppressive chemotherapy and during therapeutic administration of penicillin, and therefore type I hypersensitivity may reflect disease activity. A patient with infantile agammaglobulinemia with preserved synthesis of IgE and immediate hypersensitivity to penicillin G has been reported, and IgE myeloma has been associated with a negative Prausnitz-Küstner reaction.[16,17] Additionally, in one study serum IgE concentrations in 51 patients with IgA myelomatosis have ranged from 3-1600 units per ml (radioimmunosorbent test). This range was significantly lower than that in the control group; however, serial determinations were not obtained nor were the results correlated with chemotherapy.[18] The patient described herein experienced a type I hypersensitivity reaction to penicillin probably because the antigen was administered at a specific time in disease activity, that is, when a critical level of specific IgE was able to be synthesized.

Acknowledgment

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References **1.** Meyers BR, Hirschman SZ, Axelrod JA. Current patterns of infection in multiple myeloma. *Am J Med,* 1972; 52:87-92. **2.** Twoney JJ. Infections complicating multiple myeloma and chronic lymphocytic leukemia. *Arch Intern Med,* 1973; 132:562-565. **3.** Weinstein L, Schlesinger JJ. Pathoanatomic, pathophysiologic and clinical correlations in endocarditis. *N Engl J Med,* 1974; 291:832-837, 1122-1126. **4.** Arch GL. Experimental endocarditis. In: Duma RJ, ed. Infections of Prosthetic Heart Valves and Vascular Grafts. Baltimore: University Park Press; 1977:43-59. **5.** Bayer AS, Theofilopoulos AN, Eisenberg R, Dixon FJ, Guze LB. Circulating immune complexes in infective endocarditis. *N Engl J Med,* 1976; 295:1500-1505. **6.** Phair JP, Clarke J. Immunology of infective endocarditis. *Prog Cardiovasc Dis,* 1979; 22:137-144. **7.** Osserman EF. Multiple meyloma and related plasma cell dyscrasias. In: Samter M, ed. Immunological Diseases. Boston: Little, Brown and Company; 1978:499-529. **8.** Schmid GP, Smith RP, Baltch AL, Hall CA, Schiffman G. Antibody response to pneumococcal vaccine in patients with multiple myeloma. *J Infect Dis, 1981; 143:590-597.* **9.** Broder S, Humphrey R, Durm M, Blackman M, Meade B, Goldman C, Strober W, Waldmann T. Impaired synthesis of polyclonal (non-paraprotein) immunoglobulins by circulating lymphocytes from patients with multiple myeloma. Role of suppressor cells. *N Engl J Med,* 1975; 293:888-892. **10.** Preud'homme J-L. Immunoproliferative disorders. In: Bach J-F, ed. Immunology. New York: John Wiley and Sons; 1978:754-780. **11.** Cheson BD, Plass RR, Rothstein G. Defective opsonization in multiple myeloma. *Blood,* 1980; 55:602-606. **12.** Lazarus HM, Lederman M, Lubin A, Herzig RH, Schiffman G, Jones P, Wine A, Rodman HM. Pneumococcal vaccination: the response of patients with multiple myeloma. *Am J Med,* 1980; 69:419-423. **13.** MacGregor RR, Negendank WG, Schreiber AD. Impaired granulocyte adherence in multiple myeloma: relationship to complement system, granulocyte delivery and infection. *Blood* 1978; 51:591-599. **14.** Pruzansky JJ. Cellular aspects of immediate hypersensitivity. In: Patterson R, ed. Allergic Diseases. Diagnosis and Management. Philadelphia: J. B. Lippincott Company; 1980; 59-75. **15.** DeSwarte RD. Drug allergy. In: Patterson R, ed. Allergic Diseases. Diagnosis and Management. Philadelphia: J. B. Lippincott Company; 1980; 452-583. **16.** Endo T. Okumura H, Kikuchi K, Munakata J, Otake M, Nomura T, Asakawa H. Immunoglobulin E (IgE) multiple myeloma. A case report and review of the literature. *Am J Med,* 1981; 70:1127-1132. **17.** Ganier M, Lieberman P. Infantile agammaglobulinemia and immediate hypersensitivity to penicillin G. *JAMA,* 1977; 237:1852-1853. **18.** McLaughlan P, Stanworth DR. A critical search for evidence of changes in levels of circulating IgE in patients with cancer. *Lancet,* 1975; 1:64-65.

Breast Carcinoma, Eosinophilic Granuloma of Bone and Dermatomyositis in a Single Patient

M. ERNEST MARSHALL, M.S., M.D.

An unusual clinical triad occurring in a single patient is described. A post-menopausal woman developed carcinoma of the breast followed by unifocal eosinophilic granuloma of bone and dermatomyositis. Such a relationship has not been described previously.

SECOND primary malignancies arising in the setting of carcinoma of the breast are not uncommon. The association of dermatomyositis with underlying malignancy, including breast carcinoma, is also not an uncommon association. This report describes the first known case of unifocal eosinophilic granuloma of bone occurring in the setting of carcinoma of the breast and/or dermatomyositis.

Case Report

A 56-year-old post-menopausal woman underwent modified radical mastectomy for infiltrating ductal carcinoma arising in the upper inner quadrant of the right breast. Regional lymph nodes were free of metastatic disease. She received no adjuvant radiation or chemotherapy postoperatively. She did well with close followup for eight years at which time she developed left frontal headaches. The pain was localized to the superior and lateral aspects of the left orbit. Two weeks following the onset of headache a lump developed over the left orbit that grew sufficiently to cause asymmetry of the eyelids and brows. Skull radiographs revealed a 2 cm. radiolucency in the left frontal bone underlying the mass (Figure 1). A tangential radiographic view suggested that the entire thickness of the skull was involved. She was hospitalized for further evaluation. At the time of admission her physical examination was normal except for the facial asymmetry and surgical absence of the right breast. Chest radiograph, mammogram of the left breast and sinus films were normal. Computerized tomographic scan of the head showed the brain to be normal but the frontal bone defect was shown to be transcalvarial. Radionuclide bone and liver scans were normal. Radiographic skeletal survey was normal except for the skull defect. Complete blood counts, platelet count, erythrocyte sedimentation rate, serum chemistries and enzymes were normal except for a mild elevation of alkaline phosphatase. Serum protein electrophoresis, quantitative immunoglobulins and immunoelectrophoresis were normal.

Open biopsy was performed of the skull lesion, periosteum and soft tissue mass. A common histologic picture was seen in all these tissues. There were loosely textured aggregates of mono- and multi-nucleated histiocytes displaying abundant pale eosinophilic cytoplasm. The nuclei were round to ovoid and there were occasional prominent nucleoli. Inflammatory infiltrates containing lymphocytes and neutrophils were seen. Eosinophils were abundant. Interstitial hemorrhages and foci of necrosis were present also. The histologic picture was diagnostic for eosinophilic granuloma of the frontal bone and periosteum. Because of the transcalvarial nature of the lesion a lumbar puncture was performed. Analysis of the cerebrospinal fluid, including cytopathology, was normal.

Because eosinophilic granuloma of the bone can be fairly radioresistant and because these lesions may resolve spontaneously she was observed for one month on no therapy. She continued to experience headaches and periorbital swelling. After one month of observation she was treated with Velban 6 mg. *iv* weekly for six consecutive weeks. At the end of six weeks her headaches and periorbital swelling had resolved completely and the lytic skull lesion was diminished in size. By the eighth week the skull ra-

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Fig. 1: Skull radiograph demonstrating a 2 cm. radiolucent defect in the left frontal bone.

diograph was normal. Following the six weeks of therapy there was no further evidence of recurrence of the original lesion nor development of new lesions.

Four months later she developed a pruritic rash that involved the chest, arms, back, abdomen, face, neck and fingers. Examination revealed symmetrical eruption characterized by papular erythema over the malar areas, forehead, neck, extensor upper arms, chest and dorsum of the hands. It was maximal over the interphalangeal spaces with marked inflammation of the proximal nail folds with a suggestion of capillary telangiectasias. Skin biopsy from the forearm revealed mild superficial perivascular dermatitis. The epidermis showed orthokeratosis. The squamous epithelium was normal. The basement membrane was not thickened. The superficial vascular structures showed a mild perivascular infiltrate composed primarily of mononuclear and lymphohistiocytic cells.

During the ensuing two weeks she developed increasing weakness that especially involved the upper extremities. The diagnosis of dermatomyositis was entertained. Creatine kinase was 374 IU/L (normal 21-215 IU/L). Anti-nuclear antibody titre was $>$ 1:160 (normal $<$ 1:10) and showed an atypical speckled pattern with a homogeneous component. Anti-DNA, anti-mitochondrial, anti-myocardial, anti-parietal cell, anti-reticulin, anti-smooth muscle and anti-striational antibodies were normal. Anti-thyroid microsomal antibody titre was 1:1,600 (normal $<$ 1:100). Skin and muscle biopsies confirmed the diagnosis of dermatomyositis.

Because of her prior breast carcinoma and eosinophilic granuloma of bone, and the known association of dermatomyositis with occult malignancy she was admitted to hospital for evaluation of possible systemic malignancy. Chest radiograph, radionuclide bone scan, radiographic skeletal survey, mammogram, serum chemistries and enzymes, T_3, T_4, TSH, stool guaiac, barium enema, upper GI series and PAP smear were normal.

She was treated with Prednisone with rapid resolution of the rash and normalization of the creatine kinase titre. She continues under close surveillance, well and asymptomatic on no therapy.

Discussion

Carcinoma of the breast is the most common malignancy to affect American women. The diagnosis of carcinoma of the breast carries an increased risk of second primary malignancies such as carcinoma of the ovary, endometrium, colon and pancreas. The association of dermatomyositis with occult malignancies, including breast carcinoma, is well-recognized.

Eosinophilic granuloma of bone is a rare disease whose exact incidence among the American population is unknown. The etiology of this disease is unknown. Few investigators regard it as a frankly malignant process, but most consider it to be a **benign** histiocytic proliferation that may involve one or more bones. The prognosis for this condition is generally good.[1-5]

The present case is unique because it represents the first description of eosinophilic granuloma of bone occurring in a patient with carcinoma and/or dermatomyositis. Because of the rarity of this disease it is impossible to know what disease associations might be expected. A review of the literature revealed three reports of eosinophilic granuloma occurring in the background of other disease. Goepp[6] reported the case of a three-year-old male with acute

lymphocytic leukemia who developed a mandibular lesion that led to the diagnosis of Histiocytosis X (Hand-Schuller-Christian variant). This report is not completely analogous to the present case since Hand-Schuller-Christian disease represents the more malignant end of the spectrum of entities included within the term "Histiocytosis X" while eosinophilic granuloma of bone is the most benign of these entities.

Kjeldsberg *et al*[7] reported finding solitary eosinophilic granuloma in lymph nodes from three patients with Hodgkin's disease and three patients with non-Hodgkin's lymphomas. In all six cases the eosinophilic granuloma was confined to lymph nodes and no bone involvement was seen.

Gatewood and Esterley[8] reported a single patient who had co-existent polyostotic fibrous dysplasia and eosinophilic granuloma of bone.

The significance of the occurrence of eosinophilic granuloma of bone in a patient with carcinoma of the breast and dermatomyositis cannot be stated. No conclusions can be drawn from this single case report. Further observations of this nature, however, may lead to a better understanding of this rare disease and may suggest an etiologic link to altered immune states.

References **1.** Mickelson MR, Bonfiglio M: Eosinophilic granuloma and its variations. *Orthopedic Clin N Amer,* 8:933-945, 1977. **2.** Ferguson L, Shapiro CM: Eosinophilic granuloma of the second cervical vertebra. *Surg Neurol,* 11:435-437, 1979. **3.** Sweet RM, Kornblut AD, Hyams VJ: Eosinophilic granuloma in the temporal bone. *Laryngoscope,* 89:1545-1552, 1979. **4.** Sivalingam S, Corhill G, Ellis WG, Claiche JR: Focal eosinophilic granuloma of the temporal lobe. Case Report. *J Neurosurg,* 47:941-945, 1977. **5.** Fowles JV, Bobechko WP: Solitary eosinophilic granuloma of bone. *J Bone Joint Surg,* 52:238-243, 1970. **6.** Goepp RA: Mandibular lesion in a patient with acute lymphocytic leukemia. *J Oral Path* 5:60-64, 1976. **7.** Kjedlsberg CR, Kim H, Rappaport H: Simultaneous occurrence of eosinophilic granuloma and malignant lymphoma in lymph nodes. *Lab Invest,* 40:264, 1979. **8.** Gatewood OMB, Esterly JR: Coexistent polyostotic fibrous dysplasia and eosinophilic granuloma of bone: A unique association. *Am J. Roentgenol Radium Ther Nucl Med* 97:110-117, 1966.

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Treatment of Multiple Keratoacanthomas with Fluorouracil

KARL G. HEINE, M.D.

Two patients with multiple keratoacanthomas were successfully treated with intralesional injections of 5-fluorouracil, avoiding surgical excision and grafting. This technique is a safe, effective alternative to surgery, particularly in patients with multiple keratoacanthomas.

Surgical excision is the most common treatment for keratoacanthoma (KA), a rapidly growing, benign tumor of the skin. Reports in the dermatology literature have shown that intralesional treatment with 5-fluorouracil is an acceptable alternative to surgery for KA, particularly multiple KAs where surgical treatment would result in significant morbidity.

Materials and Methods

Intralesional 5-fluorouracil (5-FU) treatment was considered for both of the patients presented here specifically because surgical excision would have involved skin grafting and significant morbidity. Consent was obtained following discussion with each patient of the diagnosis and the available alternatives for treatment.

Treatment consisted of injections of each tumor at one to two week intervals with sterile 5-FU in a concentration of 50mg/cc. This is the concentration used for systemic chemotherapy and is readily available. Injections were given with a calibrated 1cc syringe and a 30 gauge needle. 0.1 to 0.3cc was deposited directly into the periphery of the tumor at three or four separate sites, with a final injection into the center of the lesion. Treatment was continued to each lesion until it was nearly flat, with a repeat examination scheduled one month after the final injections.

Case Reports

Case 1: A 45-year-old male auto mechanic presented with a total of five 1 to 1½cm nodules present on the dorsum of his right hand for six weeks. Incisional biopsy of the largest lesion confirmed the clinical diagnosis of KA.

The patient had had a total of six KAs excised from this area previously, with two excisions in the previous six months. He had been informed by a surgeon that removal of the tumors would require a large graft and that he would be away from work for two to three months.

Intralesional 5-FU injections were begun following the diagnostic biopsy. After nine series of injections, slight elevation remained in only two of the lesions (one of these was the lesion biopsied for diagnosis.)

After waiting one month, each of the remaining lesions was again injected and total flattening followed. A complete blood count obtained at the end of the first series of injections was normal. None of the lesions had recurred after three months.

The only local effects were pain with the injections and necrosis of the lesions as treatment progressed. (Fig. 1)

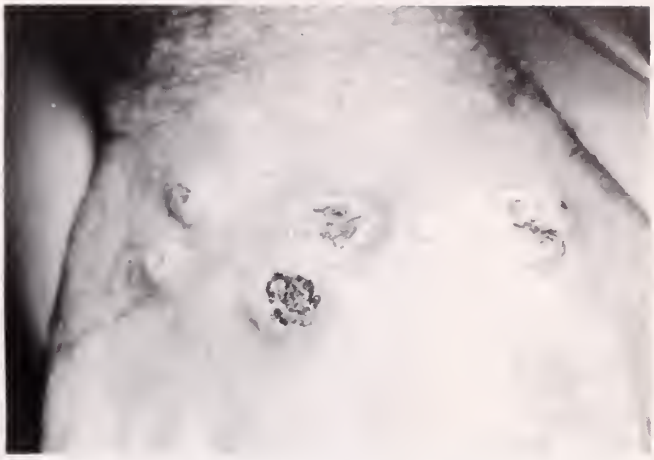
Case 2: A 59-year-old male coal miner had had a total of seven KAs excised from the dorsa of his hands and forearms over a period of six years. Excision of the KA on the left hand four months previously had required placement of a split-thickness skin graft. Another KA was removed from the dorsum of the left hand three months later without grafting, but the patient was told by his surgeon that grafting would be unavoidable if more lesions developed on the left hand.

The patient presented two months after that surgery with an expanding lesion on the dorsum of his left hand adjacent to the skin graft. A similar lesion was present on the right forearm.

From the Trover Clinic, Madisonville, KY 42431.



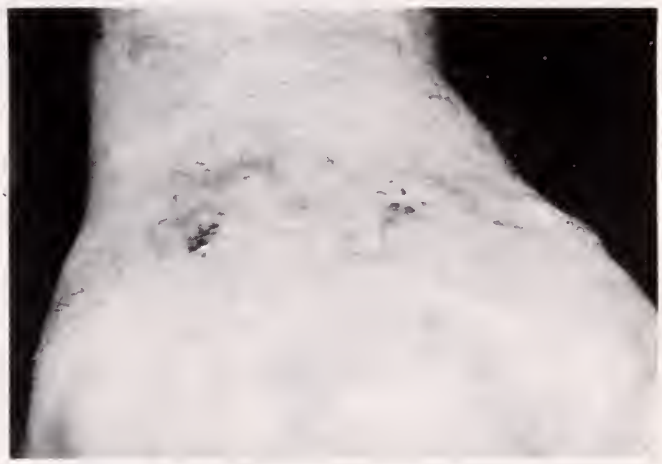
Figure 1: A: Appearance of the skin lesions in Case 1 prior to treatment.



B: Case 1 with eschars forming in the central portion of the lesions after treatment had begun.

Because both lesions appeared to be KA clinically, and because KA had been confirmed in the previous seven biopsy specimens, diagnostic biopsy was not performed.

Intralesional 5-FU injections were begun, and at least 80% improvement of each lesion was noted after three injections. Each lesion was injected a fourth time, and the patient was asked to return in one month. The original lesions remained flat, but two new lesions had subsequently developed on the dorsum of the left hand. Each of the new lesions cleared with weekly injections of 5-FU for four weeks. No new lesions had recurred three months after the final treatment with 5-FU. No systemic side effects were noted, and the local effects were limited to pain with the injections and temporary macular erythema in the skin graft adjacent to a lesion which resolved without specific treatment.



C: Case 1 at the conclusion of intralesional treatment with 5-FU.

Discussion

For the majority of solitary KAs, simple excision remains the treatment of choice. Surgical excision offers the advantages of positive tissue diagnosis and cosmetic results which are usually superior to either spontaneous resolution or destructive measures such as electrodessication and curettage. For the patients presented here, however, further surgical treatment would have required skin grafts and weeks away from work.

Goette and Odom[1,2] treated 41 KAs in 30 patients with intralesional 5-FU. Based on this extensive experience, they cite the following advantages of non-surgical treatment: absence of recurrences, good cosmetic results, excellent patient acceptance, low cost, and low incidence of local side effects. They found no systemic effects from the 5-FU injections, and none were expected considering the relatively low doses of 5-FU used compared to the accepted maximum daily intravenous dose of 800mg.

Neither patient presented here was found to have any systemic effect from the medication. Local side effects were limited to pain in the injection sites, self-limited macular erythema in one patient, and the expected necrosis and sloughing of the tumors as treatment progressed. Treatment for case number one took longer than the average of 2.8 injections reported by Goette and Odom[1,2] and corresponded more closely to

the average of six injections per tumor reported by Kurtis and Rosen[3]. The prolonged treatment duration for case number one resulted from an effort to limit the total weekly dose since five KAs were being treated simultaneously.

Of course, the possibility of mistaking a squamous cell carcinoma for a KA and treating it inappropriately exists. This danger is greatly reduced by reserving non-surgical treatment for patients with multiple lesions showing rapid, painless growth and typical appearance of a dome-shaped nodule with a large keratin-filled central crater. The diagnosis of KA can be confirmed by deep incisional biopsy prior to treatment. Lesions which do not respond or which recur after treatment should be excised.

These patients are presented with the hope of familiarizing more non-dermatologists with this safe, effective alternative to surgery in treating patients with multiple KAs.

References **1.** Odom COL. Richard B, MC USA and Goette LTC Detlef K MC USA: Treatment of Keratoacanthomas with Intralesional Fluorouracil. Arch Dermatol 114:1779-1787, 1978. **2.** Goette COL Detlef K MC USA and Odom COL Richard B, MC USA: Successful Treatment of Keratoacanthoma with Intralesional Fluorouracil. *J Am Acad Dermatol* 2:212-216, 1980. **3.** Kurtis Baylor and Rosen Theodore: Treatment of Cutaneous Neoplasms by Intralesional Injections of 5-Fluorouracil (5-FU). *J Dermatol Surg Oncol* 6:122-127, 1980.

Editor's Note

Biopsy of suspicious lesions should be done as squamous cell carcinoma if found coincident with keratoacanthoma.

An added complication... in the treatment of bacterial bronchitis*



Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

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cefaclor

Pulvules®, 250 and 500 mg

Brief Summary Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae* (*Diplococcus pneumoniae*), *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions*—If an allergic reaction to Ceclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers—Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor® (cefaclor, Lilly) is administered to a nursing woman.

Usage in Children—Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, halt of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations of SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

* Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

References

1. Antimicrob. Agents Chemother., *8*: 91, 1975.
2. Antimicrob. Agents Chemother., *11*: 470, 1977.
3. Antimicrob. Agents Chemother., *13*: 584, 1978.
4. Antimicrob. Agents Chemother., *12*: 490, 1977.
5. Current Chemotherapy (edited by W. Siegenthaler and R. Luthy), II: 880. Washington, D.C.: American Society for Microbiology, 1978.
6. Antimicrob. Agents Chemother., *13*: 861, 1978.
7. Data on file, Eli Lilly and Company.
8. Principles and Practice of Infectious Diseases (edited by G.L. Mandell, R.G. Douglas, Jr., and J.E. Bennett), p. 487. New York: John Wiley & Sons, 1979.

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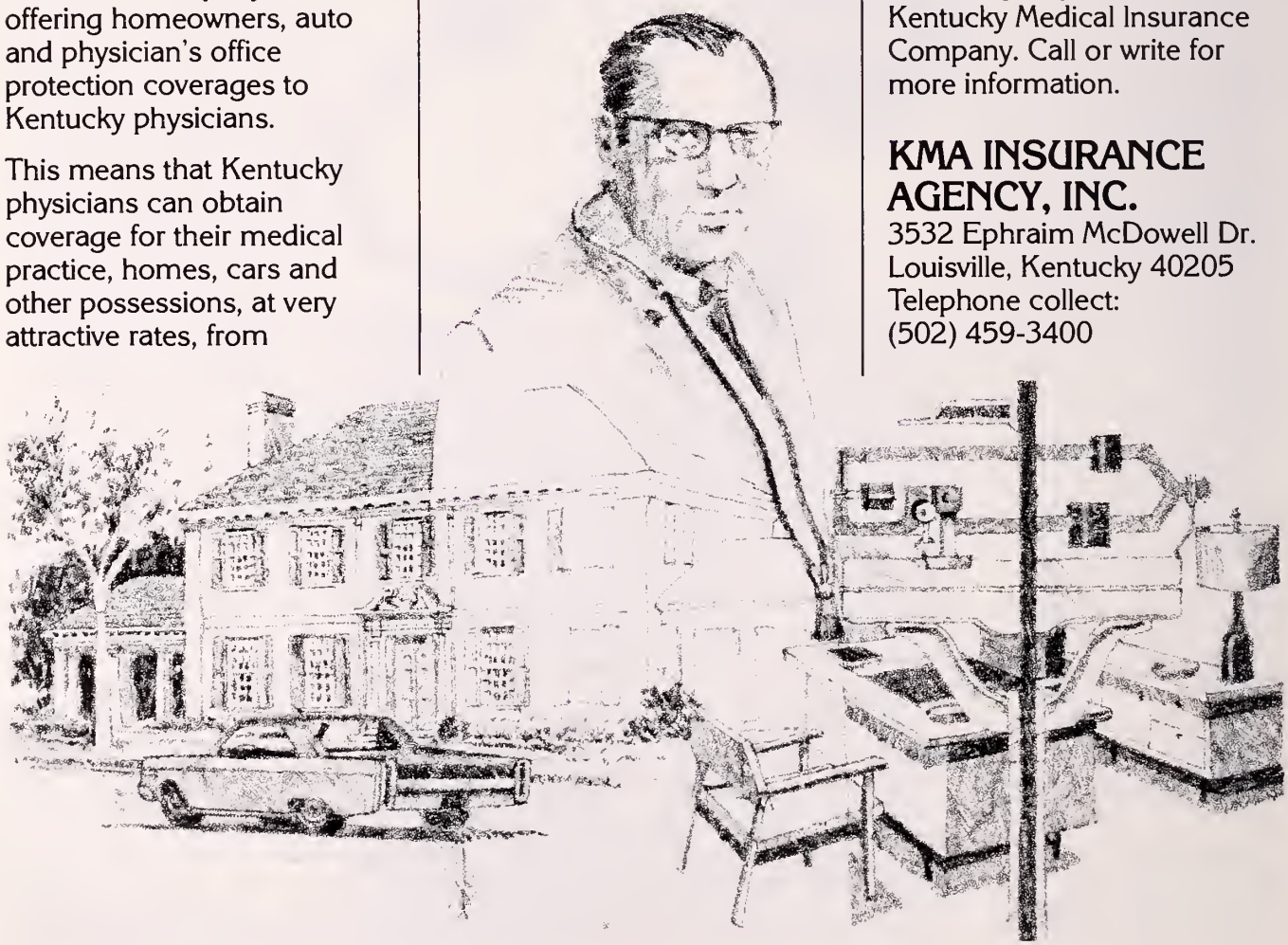
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References:

1. Hart FD, Huskisson EC, Ansell BM in Hart FD (editor): Drug Treatment of the Rheumatic Diseases, 2nd Ed, Adis Press, Balgowlah, Australia, 1982, p. 30.
2. Rondeau PL, Yeung E, Nelson P: Canad Dent Assoc J 46:433-439, 1980.
3. Selwyn P and Giles AD: Br Jrl of Clin Practice, Supplement 6, Safe and effective analgesia following dental surgery: A comparison of brufen and distalgesic. Pg 87-90. 1980.
4. Taina E: Curr Med Res Opinion, 7:423-428, 1981.

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INDICATIONS AND USAGE: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in the long-term management of these diseases. Safety and effectiveness have not been established for Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain. Treatment of primary dysmenorrhea.

CONTRAINDICATIONS: Patients hypersensitive to ibuprofen, or with the syndrome of nasal polyps, angio-edema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory drugs (see WARNINGS).

WARNINGS: Anaphylactoid reactions have occurred in patients hypersensitive to aspirin (see CONTRAINDICATIONS). Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration, perforation, or gastrointestinal bleeding can end fatally, however, an association has not been established. Rufen should be given under close supervision to patients with a history of upper gastrointestinal tract disease, and only after consulting the ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be attempted. If Rufen must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

PRECAUTIONS: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If developed, discontinue Rufen and administer an ophthalmologic examination.

Fluid retention and edema have been associated with Rufen; caution should be used in patients with a history of cardiac decompensation.

Rufen can inhibit platelet aggregation and prolong bleeding time. Use with caution in patients with intrinsic coagulation defects and those taking anticoagulants.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy, this therapy should be tapered slowly when adding Rufen.

DRUG INTERACTION: *Coumarin-type anticoagulants.* The physician should be cautious when administering Rufen to patients on anticoagulants.

Aspirin. Concomitant use may decrease Rufen blood levels.

PREGNANCY AND NURSING MOTHERS: Rufen should not be taken during pregnancy nor by nursing mothers.

ADVERSE REACTIONS: Incidence greater than 1%. Gastrointestinal: The most frequent adverse reaction is gastrointestinal (4 to 16%). Includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of GI tract (bloating and flatulence). Central Nervous System: dizziness*, headache, nervousness. Dermatologic: rash* (including maculopapular type), pruritus. Special Senses: tinnitus. Metabolic: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS). *Incidence 3% to 9%.

Incidence less than 1 in 100. Gastrointestinal: gastric or duodenal ulcer with bleeding and/or perforation, hemorrhage, melena. Central Nervous System: depression, insomnia, confusion, emotional lability, somnolence, aseptic meningitis with fever and coma. Dermatologic: vesiculobullous eruptions, urticaria, erythema multiforme, Stevens-Johnson syndrome and alopecia. *Special Senses:* hearing loss, amblyopia (blurred and/or diminished vision, scotomata and/or changes in color vision) (see PRECAUTIONS). Hematologic: neutropenia, agranulocytosis, aplastic anemia, hemolytic anemia (sometimes Coombs' positive), thrombocytopenia with or without purpura eosinophilia, decreases in hemoglobin and hematocrit. Cardiovascular: congestive heart failure in patients with marginal cardiac function, elevated blood pressure. Allergic: syndrome of abdominal pain, fever, chills, nausea and vomiting, anaphylaxis, bronchospasms (see CONTRAINDICATIONS). Renal: acute renal failure in patients with preexisting significantly impaired renal function, decreased creatinine clearance, polyuria, azotemia, cystitis, hematuria. Miscellaneous: dry eyes and mouth, gingival ulcers, rhinitis.

Causal relationship unknown. Gastrointestinal: pancreatitis. Central Nervous System: paresthesias, hallucinations, dream abnormalities, pseudotumor cerebri. Dermatologic: toxic epidermal necrolysis, photoallergic skin reactions. Special Senses: conjunctivitis, diplopia, optic neuritis. Hematologic: bleeding episodes. Allergic: serum sickness, lupus erythematosus syndrome, Henoch-Schonlein vasculitis. Endocrine: gynecomastia, hypoglycemia. Cardiovascular: arrhythmias (sinus tachycardia, bradycardia, and palpitations). Renal: renal papillary necrosis.

OVERDOSAGE: Acute overdosage, the stomach should be emptied. Rufen is acidic and excreted in the urine, alkaline diuresis may benefit.

DOSAGE AND ADMINISTRATION: Rheumatoid arthritis and osteoarthritis, including flareups of chronic disease: Suggested dosage 400 mg t.i.d. or q.i.d.

Dysmenorrhea: 400 mg every 4 hours as necessary.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for the relief of pain. *Do not exceed 2,400 mg per day.*

CAUTION: Federal law prohibits dispensing without prescription.

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Benzodiazepines and Good Judgment

My friend is not famous for his diplomacy and his disgust was palpable. "Most doctors treat alcoholism as if it were an acute Valium® deficiency!" A doctor himself, a recovering alcoholic, he has some very definite ideas about scheduled drugs, especially in alcoholism.

Valium® and the rest of the benzodiazepines are marvelous drugs from the practitioner's standpoint. They are certainly effective against anxiety and often help with muscle spasms, convulsions and insomnia. Despite this effectiveness, they have a huge margin of safety in acute toxicity, demonstrated often in overdose. They have some other qualities that are troublesome.

Mostly, their half-lives have turned out to be pretty long, astonishingly long in some cases, which would be a real advantage if we were looking for a constant blood level for long periods, which we seldom are. But some producers, rather than having their chemists change the sluggish molecule, are letting their hucksters change the pitch over to something that sounds a lot like "prolonged blood levels of benzodiazepines are good for you." Respected clinicians who ought to know better are now testifying for the merchants, saying that people should take long-acting forms to avoid a nasty letdown or a troublesome return of anxiety. This point quickly raises the question as to why we ever let someone handle his anxiety with chronic use of a minor tranquilizer anyway. It also makes us wonder how long the proponents feel that the sufferer should be protected against the vagaries of existence with these remarkable chemicals which can't change anything about the cause of the anxiety. They are also demonstrably habit-forming, though the dependency that they produce does seem to be less than, say, the barbiturates or alcohol.

Anyway, let's face it: We, collectively, are prescribing too many minor tranquilizers. I've done so myself. Now it's time for a genuine change in our prescribing habits and it's going to take some time and effort because lots of patients, inured to the prescribing practices of the past, aren't going to like it. We are going to need to take time to listen to them and to instruct very carefully. We are going to have to care enough about the patient so that we will not simply flip out a prescription pad and do the quick and easy thing.

The capacity to feel pain is one of God's great gifts to mankind. To sit on a tack is to feel pain. To leap up and away, to pluck out the tack, is the proper response. To stay seated, controlling the pain with a chemical, has little to recommend it. Anxiety appears to have many of the characteristics of pain and it can serve us well, warning us away from a risk or supplying the motivation for a necessary change. Routinely to control anxiety, or an associated symptom such as insomnia, with chemicals, whether they be alcohol, cannabis, Tranxene® or Dalmane® is neither wise nor safe because the symptoms are often quite appropriate to the sufferer's circumstances. Drug treatment for anxiety or insomnia should be used when the symptom is truly incapacitating or causes disabling discomfort; even then the sufferer should be told that it is going to be a short-range prescription. There

are lots of devices, non-chemical devices, for dealing with these symptoms. Exercise is a good one and it does some fine things for other elements of the soma and the psyche as well.

Proper use of tranquilizers involves only a modest amount of technical knowledge and a plentiful supply of mature judgment. Good judgment says that these drugs simply have no use in alcoholics, except briefly, in some, to assist in withdrawl. Good judgment says that they should seldom be used indefinitely in anyone, that the dosage must be adjusted to the patient. Good judgment says that we must begin at once to deal with those patients who have been using benzodiazepines, either as soporifics or as tranquilizers, chronically. After prolonged use the drugs must not be stopped abruptly but generally they must be stopped, taking even a month if necessary, though most inpatients can be tapered off in 10 days or less.

The benzodiazepines are excellent drugs and we are still getting refinements in the chemical structure and we continue to learn about what they can and cannot do. An occasional dose for a specific instance is surely safe and effective, using the medicine much as one would use aspirin for an occasional headache. Routine, prolonged use must be viewed with skepticism. There are occasions for it, but they are rare and one hopes the word gets around.

David L. Stewart, M.D.

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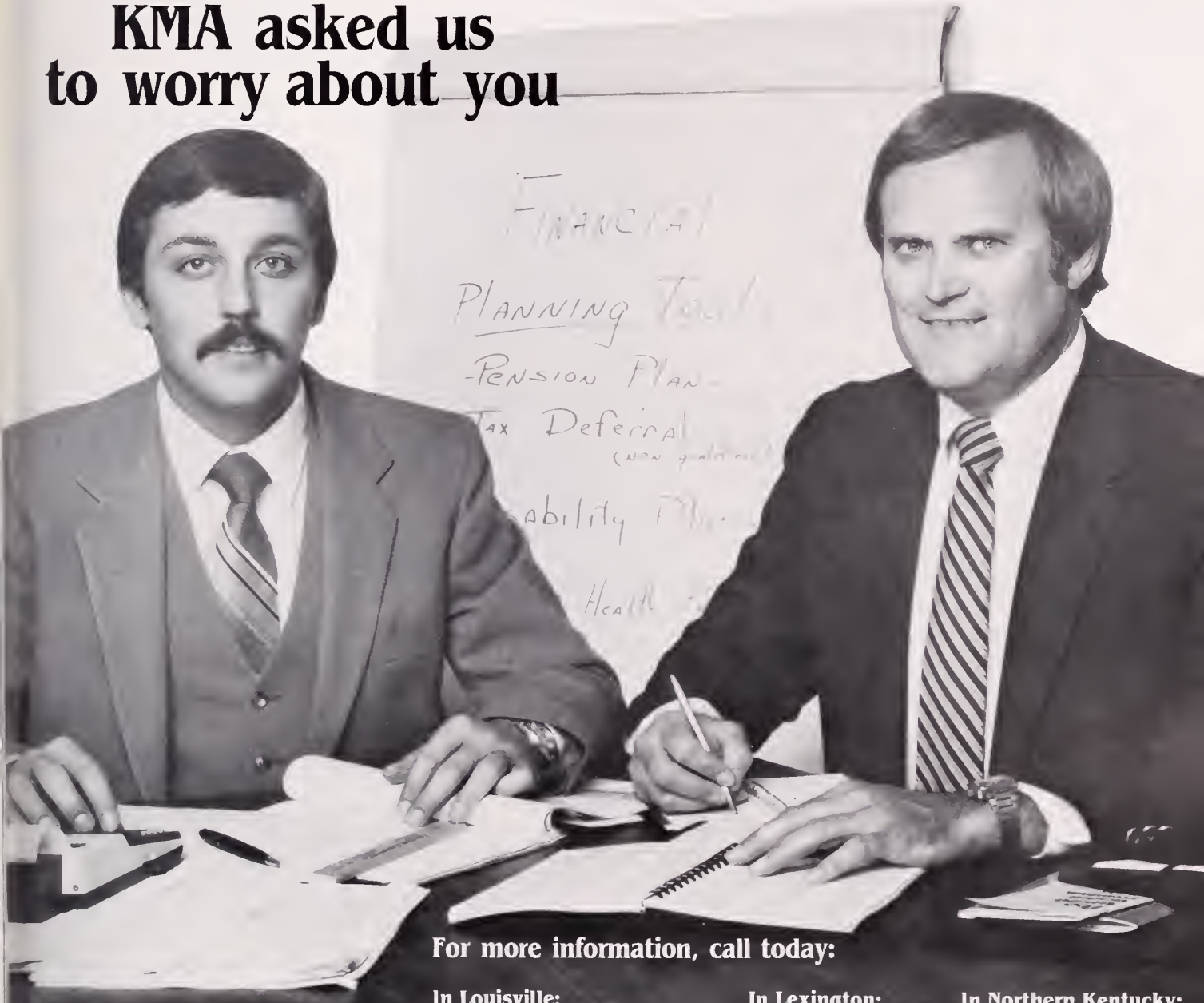
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Brief Summary of Prescribing Information (see attached)

Brief Summary of prescribing information

RU-TUSS®

TABLETS

INDICATIONS AND USAGE: Ru-Tuss Tablets provide relief of the symptoms resulting from irritation of sinus, nasal and upper respiratory tract tissues.

CONTRAINDICATIONS: Hypersensitivity to antihistamines or sympathomimetics. Ru-Tuss Tablets are contraindicated in children under 12 years of age and in patients with glaucoma, bronchial asthma and women who are pregnant. Concomitant use of MAO inhibitors is contraindicated.

WARNINGS: Ru-Tuss Tablets may cause drowsiness. Patients should be warned of possible additive effects caused by taking antihistamines with alcohol, hypnotics, sedatives or tranquilizers.

PRECAUTIONS: Ru-Tuss Tablets contain belladonna alkaloids, and must be administered with care to those patients with urinary bladder neck obstruction. Caution should be exercised when Ru-Tuss Tablets are given to patients with hypertension, cardiac or peripheral vascular disease or hyperthyroidism. Patients should avoid driving a motor vehicle or operating dangerous machinery (See WARNINGS:).

OVERDOSAGE: Since the action of sustained release products may continue for as long as 12 hours, treatment of overdoses directed at reversing the effects of the drug and supporting the patient should be maintained for at least that length of time. Saline cathartics are useful for hastening evacuation of unreleased medication. In children and infants, antihistamine overdosage may produce convulsions and death.

ADVERSE REACTIONS: Hypersensitivity reactions such as rash, urticaria, leukopenia agranulocytosis, and thrombocytopenia may occur. Other adverse reactions to Ru-Tuss Tablets may be drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension/hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerostomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, dizziness and insomnia. Large overdoses may cause tachypnea, delirium, fever, stupor, coma and respiratory failure.

DOSAGE AND ADMINISTRATION: Adults and children over 12 years of age, one tablet morning and evening. Not recommended for children under 12 years of age. Tablets are to be swallowed whole.

Federal law prohibits dispensing without prescription.

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Pinworms work the night shift



Artist's interpretation:
The nocturnal egg-laying of the female pinworm causes acute perianal itch...making children shift sleeplessly through the night.

Put pinworms out of work...

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Antiminth® (pyrantel pamoate) has a unique, rapid immobilizing effect on worms. Unlike mebendazole, which blocks glucose uptake—slowly "starving" helminths to death—Antiminth quickly acts on the neuromuscular junction to promptly paralyze parasites.

97% efficacy with a single dose

A single dose of Antiminth delivers rapid clinical and parasitological cures, "Single doses... showed high overall efficacy against *Enterobius vermicularis* (97.2%) and *Ascaris lumbricoides* (97.5%)."[1]

Simple, well tolerated therapy

Antiminth offers ease of administration and patient tolerance. "...when compared to the other single dose agents available, [Antiminth] has the advantage of being non-staining and may be better tolerated."[2]

The dosage form children like

Antiminth is available as a pleasant tasting, caramel-flavored oral suspension. Effective in just



one dose against pinworm and roundworm—in both children and adults—Antiminth is easy-to-administer and easy-to-take.

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In some parts of the world, large populations are afflicted with helminthic infections. Physicians in endemic areas have become experts on parasitic diseases—and have come to rely on Antiminth for the rapid cure of infestations. Antiminth is recommended as an agent of first choice for pinworm and roundworm by leading medical authorities.[3]

Warnings

Usage in Pregnancy Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions

Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions

The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration

Children and Adults Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

References 1. Pitts NE, Migliardi JR: *Clinical Pediatrics* 13:87, 1974. **2.** Modell W: *Drugs of Choice* 1980-1981. C. V. Mosby Co., St. Louis, 1980, p. 362. **3.** Goodman LS, Gilman A: *The Pharmacologic Basis of Therapeutics*, 6th edition, MacMillan Publishing Co., Inc., New York, 1980, p. 1032.

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Stephen Z. Smith, M.D.
Assistant Scientific Editor

BOOK REVIEWS

Color Atlas of Physiology

Georg Thieme Verlag, Yearbook Medical Publications, 1981, 328 pages

Not only is this book recently conceived, but to its credit, this Atlas is unique. Utilizing the economy of visual presentations, the authors have distilled textbooks of physiology into a meager 300 pages. Obviously detail is sacrificed for the cause—a condensed but inclusive review book. Yet with myopic printing and utilization of any available space there is a plethora of detail.

Each page has a collage of colored schema labeled meticulously. Juxtaposed is the accompanying text, an expose of the drawing. These fraternal twins of a different media demand careful examination by the reader. In that sense, this book will not be a rapid review. However, as a review, it will certainly be efficient. Although the authors advertise the book as embracing the medical school introductory course, this atlas is best used by the more sophisticated and schooled student.

Spelling mistakes and inappropriate syntax are to be found, but are easily forgiven in view of the foreign authorship. Originally written in German, the text is admirably translated for English readers.

Since 1979, the year of origin, the contents in places are becoming subject to revision. Errors are minimal and in significance trivial.

Unfortunately, one distinguished author is apparently missing at sea and his companion author inherits the possibilities of future editions. If this is to be the only child, then as an atlas and as a review, it is a literary gem.

Correlative Neuroanatomy & Functional Neurology

Lange Medical Publications, 1982, 476 pages

Correlative Neuroanatomy & Functional Neurology is probably a misleading title. Actually this is a review of medical neurology with the appropriate dedication to anatomic correlates. From the introduction on, the author is talking to the dilatante student of neurology. True to his predecessors, Dr. Chusid initiates the book with seemingly endless pages of anatomical detail and the corresponding physiology. Thereafter the text departs and adapts to a clinicians delight a succinct course in neurology. Illustrations fill the book generously visualizing the words and gratefully sorting out the confusion. Many photographs of professional quality are also given to the reader. In responding to the explosive development, proliferation and maturation of computerized tomographic technology, the editor submits many pictures of in vivo C.T. scans. The revolution in diagnosis these scans birthed is documented by each chapter having its share of C.T.'s.

My objections are precipitated by the imbalance of the book. Common problems—headaches, epilepsy, psychiatric disturbance, etc.—are peripheral to its text and seem included out of obedience to completeness rather than weighing their relevance. Rare diseases and abnormalities continue to consume inappropriate paging. Obviously the readers will be the legions of students, erstwhile CME seekers, and board candidates, and they are expected to know the details of neurological minutia.

The text is devoid of major errors. Treatment is briefly discussed commensurate with the author's objective. A thorough index, glossary and appendix of data make a helpful epilogue.

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J-9043-4 July 1981

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Because it is metabolized by simple conjugation rather than complex oxidative reactions, Ativan does not compete with other drugs for hepatic P450 microsomal enzymes. Concomitant use with Tagamet® (cimetidine), for example, does not result in delayed clearance or increased sedation†—effects which have been reported with other benzodiazepines.[1-5]

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The short half-life of Ativan facilitates more rapid response to dosage adjustments, aiding you in titrating therapy to the patient's changing needs. Once you decide to discontinue Ativan, it will be out of your patient's system 4 days after the final dose—unlike the long-acting, multi-metabolite benzodiazepines which take as long as 2 weeks to be totally eliminated.

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References:
1. Klotz U, Reimann I: N Engl J Med *302*:1012-1014, 1980
2. Desmond PV, Patwardhan RV, Schenker S, et al: Ann Intern Med *93*:266-268, 1980.
3. Patwardhan RV, Yarborough GW, Desmond PV, et al: Gastroenterology *79*:912-916, 1980.
4. Sellers EM, Naranjo CA, Peachey JE: N Engl J Med *305*:1255-1262, 1981.
5. Ruffalo RL, Thompson JF, Segal JL. South Med J *74*:1075-1078, 1981

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*Pharmacokinetics cannot as yet be directly related to efficacy
†All benzodiazepines produce additive effects when given with CNS depressants such as barbiturates or alcohol.

See important information on following page.

Ativan® for (lorazepam)℞ Anxiety

Brief Summary of Prescribing Information.

Indications and Usage: Management of anxiety disorders or short-term relief of symptoms of anxiety or anxiety associated with depressive symptoms. Anxiety or tension associated with stress of everyday life usually does not require treatment with an anxiolytic.

Effectiveness in long-term use, i.e., more than 4 months, has not been assessed by systematic clinical studies. Reassess periodically usefulness of the drug for the individual patient.

Contraindications: Known sensitivity to benzodiazepines or acute narrow-angle glaucoma.

Warnings: Not recommended in primary depressive disorders or psychoses. As with all CNS-acting drugs, warn patients not to operate machinery or motor vehicles, and of diminished tolerance for alcohol and other CNS depressants.

Physical and Psychological Dependence: Withdrawal symptoms like those noted with barbiturates and alcohol have occurred following abrupt discontinuance of benzodiazepines (including convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Addiction-prone individuals, e.g. drug addicts and alcoholics, should be under careful surveillance when on benzodiazepines because of their predisposition to habituation and dependence. Withdrawal symptoms have also been reported following abrupt discontinuance of benzodiazepines taken continuously at therapeutic levels for several months.

Precautions: In depression accompanying anxiety, consider possibility for suicide.

For elderly or debilitated patients, initial daily dosage should not exceed 2mg to avoid oversedation. Terminate dosage gradually since abrupt withdrawal of any antianxiety agent may result in symptoms like those being treated: anxiety, agitation, irritability, tension, insomnia and occasional convulsions. Observe usual precautions with impaired renal or hepatic function. Where gastrointestinal or cardiovascular disorders coexist with anxiety, note that lorazepam has not been shown of significant benefit in treating gastrointestinal or cardiovascular component. Esophageal dilation occurred in rats treated with lorazepam for more than 1 year at 6mg/kg/day. No effect dose was 1.25mg/kg/day (about 6 times maximum human therapeutic dose of 10mg/day). Effect was reversible only when treatment was withdrawn within 2 months of first observation. Clinical significance is unknown; but use of lorazepam for prolonged periods and in geriatrics requires caution and frequent monitoring for symptoms of upper G.I. disease. Safety and effectiveness in children under 12 years have not been established.

ESSENTIAL LABORATORY TESTS: Some patients have developed leukopenia; some have had elevations of LDH. As with other benzodiazepines, periodic blood counts and liver function tests are recommended during long-term therapy.

CLINICALLY SIGNIFICANT DRUG INTERACTIONS: Benzodiazepines produce CNS depressant effects when administered with such medications as barbiturates or alcohol.

CARCINOGENESIS AND MUTAGENESIS: No evidence of carcinogenic potential emerged in rats during an 18-month study. No studies regarding mutagenesis have been performed.

PREGNANCY: Reproductive studies were performed in mice, rats, and 2 strains of rabbits. Occasional anomalies (reduction of tarsals, tibia, metatarsals, malrotated limbs, gastroschisis, malformed skull and microphthalmia) were seen in drug-treated rabbits without relationship to dosage. Although all these anomalies were not present in the concurrent control group, they have been reported to occur randomly in historical controls. At 40mg/kg and higher, there was evidence of fetal resorption and increased fetal loss in rabbits which was not seen at lower doses. Clinical significance of these findings is not known. However, increased risk of congenital malformations associated with use of minor tranquilizers (chlordiazepoxide, diazepam and meprobamate) during first trimester of pregnancy has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, use of lorazepam during this period should almost always be avoided. Possibility that a woman of child-bearing potential may be pregnant at institution of therapy should be considered. Advise patients if they become pregnant to communicate with their physician about desirability of discontinuing the drug. In humans, blood levels from umbilical cord blood indicate placental transfer of lorazepam and its glucuronide.

NURSING MOTHERS: It is not known if oral lorazepam is excreted in human milk like other benzodiazepines. As a general rule, nursing should not be undertaken while on a drug since many drugs are excreted in milk.

Adverse Reactions, if they occur, are usually observed at beginning of therapy and generally disappear on continued medication or on decreasing dose. In a sample of about 3,500 anxious patients, most frequent adverse reaction is sedation (15.9%), followed by dizziness (6.9%), weakness (4.2%) and unsteadiness (3.4%). Less frequent are disorientation, depression, nausea, change in appetite, headache, sleep disturbance, agitation, dermatological symptoms, eye function disturbance, various gastrointestinal symptoms and autonomic manifestations. Incidence of sedation and unsteadiness increased with age. Small decreases in blood pressure have been noted but are not clinically significant, probably being related to relief of anxiety.

Overdosage: In management of overdosage with any drug, bear in mind multiple agents may have been taken. Manifestations of overdosage include somnolence, confusion and coma. Induce vomiting and/or undertake gastric lavage followed by general supportive care, monitoring vital signs and close observation. Hypotension, though unlikely, usually may be controlled with Levarterenol Bitartrate Injection U.S.P. Usefulness of dialysis has not been determined.

Ativan®
for (lorazepam)℞
Anxiety

Dosage: **Individualize for maximum beneficial effects. Increase dose gradually when needed, giving higher evening dose before increasing daytime doses. Anxiety, usually 2-3mg/day given b.i.d. or t.i.d.; dosage may vary from 1 to 10mg/day in divided doses. For elderly or debilitated, initially 1-2mg/day; insomnia due to anxiety or transient situational stress, 2-4mg h.s.**

How Supplied: **0.5, 1.0 and 2.0mg tablets.**

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Health and Safety Tip From the American Medical Association

MARKERS LISTED TO IDENTIFY ALCOHOLICS

How can you tell that a regular, heavy drinker has crossed over the line and become an alcoholic, who no longer can control his or her drinking?

The American Medical Association in its Manual on Alcoholism points to some markers to help identify the alcoholic.

1. Increasing consumption of alcohol, with frequent, perhaps unintended, episodes of intoxication.

2. Drinking to handle problems or relieve symptoms.

3. Obvious preoccupation with alcohol and the frequent need to have a drink.

4. Surreptitious drinking or gulping of drinks.

5. Tendency toward making alibis and weak excuses for drinking.

6. Refusal to concede what is obviously excessive consumption and expressing annoyance when the subject is mentioned.

7. Frequent absenteeism from the job, especially following weekends and holidays.

8. Repeated changes in jobs, particularly if to successively lower levels, or employment in a capacity beneath ability, education and background.

9. Shabby appearance, poor hygiene, and behavior and social adjustment inconsistent with previous levels or expectations.

10. Persistent vague physical complaints without apparent cause, particularly insomnia, stomach upsets, headaches, loss of appetite.

11. Multiple contacts with the health care system with disorders that are alcohol caused or related.

12. Persistent marital and family problems, perhaps with multiple marriages.

13. History of arrests for drunkenness or drunken driving.

Submitted by the KMA Impaired Physicians' Committee

Radiation Accident Preparedness

DANIEL F. DANZL, MD, STEVEN I. ACKERMAN, MD AND SALVATOR VICARIO, MD

All Kentucky emergency departments should be capable of handling victims of radiation accidents. Patients may be exposed from accidents at nuclear power plants, isotope production laboratories and transportation spills. There are numerous Kentucky facilities using radiation sources. In addition, chemistry laboratories and nuclear medicine departments handle radioactive materials daily.

There are a few basic concepts of radiation physics that need to be understood. "Radioactivity" refers to the loss of particles (alpha or beta) or energy (gamma rays) from an unstable atom which is spontaneously decaying.

Alpha particles are helium nuclei, with two protons and two neutrons. They only travel a few centimeters in air and do not penetrate intact skin. Alpha radiation is a hazard to open wounds or if inhaled or injested. It can be shielded by a sheet of paper.

Beta particles are similar to electrons. Their range is from tens of centimeters in air to several milimeters in tissue. They are shieldable by less than an inch of aluminum.

Gamma rays are electromagnetic energy (protons) emitted from an atom's nucleus. They are similar to x-rays, whose origin is outside the nucleus. Their range is from several meters in air to several centimeters in tissue. Beta particles and gamma rays are both an external and internal biological hazard, and require inches of lead of shielding. Neutrons are released from nuclear reactors, not from the common radionuclides. They are three to ten times more damaging to tissue than gamma or x-rays.

Basic protection principles involve distance, as well as time of exposure and shielding. Radiation exposure follows the inverse square law, and is decreased to one-fourth at twice the distance from the source.

Victims may be affected in three distinct ways.

Contamination occurs when a radioactive substance is physically attached to the patients skin or clothes. Detection is commonly initiated with a Geiger-mueller counter, which is excellent for detecting beta or gamma radiation. A window on the instrument must be used for detection of alpha particles, because of their low penetrating ability. Proporational alpha counters (PAC's) are also available.

Incorporation occurs when a radioactive material is inhaled, ingested, or contaminates a wound. Unless immediately decorporated, further tissue destruction occurs.

Irradiation results when a patient has been exposed to gamma or x-rays. All tissue damage is immediate. The patient is **NOT** radioactive, and poses no threat to personnel. The irradiation may be local or generalized, with the resultant "radiation syndrome."

While several radiation accidents protocols are available, the one published by Leonard and Ricks has three comprehensive appendices for posting in the emergency department.[1]

When the hospital is notified that a radiation accident has occurred, the director of the emergency department must decide whether to activate the plan. Notification of a radiation safety officer (RSO), the director of nursing, security personnel, hospital administration, and a "public relations" officer is essential. After a recent accident in Pennsylvania with a truck carrying radiocative materials, over 90 persons who saw the cloud sought care in a local emergency department. There was no leakage. In addition to injuries, determine in the field if contamination, incorporation, or irradiation has occured.

Emergency department preparation includes establishment of a protected route with floor coverings, and a decontamination room. The RSO will clearly demarcate the contaminated from the clean side of the room, and monitor all existing traffic. The engineering department should turn off the ventilation unless a separate systems exists.

The decontamination team must be familiar with protective gowning techniques, and be given dosimeters. Procedures for decontamination are outlined by Leonard and Ricks, and should be available in the room.[2]

Technical assistance during radiation accidents is available in Kentucky from the State Radiation Control Branch at (502) 564-3700. In addition, the Radiation Emergency Assistance Center/Training Site (REAC/TS) in Oak Ridge, Tennessee has a 24-hour consulation service available at (615) 481-2441—beeper #241.

References 1. Leonard RB, Ricks RC: Emergency department radiation accident protocol. *Ann Emerg Med* 9:462-70, 1980. 2. Emergency Handling of Radiation Accidents. Radiation Control Branch, KY Department for Human Resources. 1979.

Written at the request of the KMA Continuing Medical Education Committee by the Department of Emergency Medicine, University of Louisville, Louisville, Ky.



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Smoking. Chronic Obstructive Pulmonary Disease. And LUFYLLIN. The three are closely related. And the reason is clear. Of all C.O.P.D. cases, 75% to 80% are related to cigarette smoking.[1]

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*Only in Chronic Obstructive Pulmonary Disease with reversible bronchospasm.

1. National Interagency Council on Smoking and Health. *The Smoking Digest. Progress Report on a Nation Kicking the Habit.* 1977.

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LUFYLLIN® HELPS CONTROL IT.*
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A bronchodilator with a metabolic advantage for "smoker's disease."

LUFYLLIN®-400
(dyphylline) TABLETS

Please see following page for prescribing information.

LUFYLLIN® (dyphylline) Tablets
LUFYLLIN®-400 (dyphylline) Tablets
Before prescribing, please consult full product information, a brief summary of which follows:
Indications: For relief of acute bronchial asthma and for reversible bronchospasm associated with chronic bronchitis and emphysema.
Contraindications: Hypersensitivity; use with other xanthines.
Warnings: Status asthmaticus is a medical emergency. Excessive doses may be expected to be toxic.
Usage in Pregnancy: Safe use in pregnancy has not been established, do not use in pregnant women unless the potential benefits outweigh the possible hazards.
Precautions: Use with caution in patients with severe cardiac disease, hypertension, hyperthyroidism, acute myocardial injury, congestive heart failure, or peptic ulcer. Chronic high dosage is usually associated with gastrointestinal irritation.
Adverse Reactions:
Gastrointestinal—irritation, nausea, vomiting, epigastric pain, headache, hematemesis, diarrhea
Central Nervous System—stimulation, irritability, restlessness, insomnia, reflex hyperexcitability, muscle twitching, clonic and tonic generalized convulsions, agitation.
Cardiovascular—palpitation, tachycardia, extrasystoles, flushing, marked hypotension, and circulatory failure.
Respiratory—tachypnea, respiratory arrest.
Renal—albuminuria, increased excretion of renal tubule and red blood cells.
Others—fever, dehydration.
Overdosage:
Symptoms—In infants and small children: agitation, headache, hyperreflexia, fasciculations, and clonic and tonic convulsions. In adults: nervousness, nausea, vomiting, tachycardia, and extrasystoles.
Therapy—No specific treatment. Discontinue drug immediately. Provide supportive treatment as indicated. Ipecac syrup for oral ingestion. Avoid sympathomimetics. Sedatives such as short-acting barbiturates help control CNS stimulation. Restore the acid-base balance with lactate or bicarbonate.
Drug Interactions: Toxic synergism with sympathomimetic bronchodilators may occur.
Dosage and Administration:
Usual Adult Dosage—15 mg/kg every 6 hours, up to four times a day. Titrate the dosage individually.
How Supplied:
LUFYLLIN Tablets: (Each white, rectangular, monogrammed tablet contains 200 mg dyphylline):
NDC 0037-0521-92, bottle of 100.
NDC 0037-0521-97, bottle of 1000.
NDC 0037-0521-85, box of 100 unit-dose individually film-sealed tablets.
LUFYLLIN-400 Tablets: (Each white, capsule-shaped, monogrammed tablet contains 400 mg dyphylline):
NDC 0037-0731-92, bottle of 100.
NDC 0037-0731-97, bottle of 1000.
NDC 0037-0731-85, box of 100 unit-dose individually film-sealed tablets.
Caution: Federal (U.S.A.) law prohibits dispensing without prescription.

A7368 March, 1981 REV 7/80

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THE KENTUCKY MEDICAL ASSOCIATION WILL BE SPONSORING THREE PRACTICE MANAGEMENT WORKSHOPS IN MARCH, 1983. The Workshops are conducted by the American Medical Association's Office of Practice Management. This year the Association will offer a one-day course for physicians on March 22nd called, "Computers in Private Practice." On March 23rd, two one-half day sessions on "Collections" will be held for medical assistants and on March 24 and 25, a two day course entitled, "Starting Your Practice" will be held for new physicians. Each of these programs has limited registration and you are requested to contact the KMA Headquarters Office for additional information.

Digest of Proceedings
KMA Board of Trustees
December 15-16, 1982

The KMA Board of Trustees met in regular session at the KMA Headquaters Office on December 15-16, 1982. Reports were made by the President, Secretary-Treasurer, Senior Delegate to the AMA, Secretary of the State Board of Medical Licensure, Commissioner for Health Services, and the KPRO President.

Highlights of Board action taken at the meeting include:

- Appointment of a Committee to Study Changing Trends in Medicine.
- Endorsement of the concept of the KMA Judicial Council serving as a subcommittee of the State Board of Medical Licensure.
- Recommendation that Lee C. Hess, M.D., Florence, be named as KMA's representative on an AMA Advisory Committee on National Health Policy.
- Authorization to file Articles of Incorporation for KMA Physician Services, Inc. (a holding company).
- Authorization to file an application for KMA Physician Financial Services, a Federal Credit Union; to invest $100,000; and to loan an additional $100,000 to the credit union for operating expenses.
- Nominations to AMA Councils: AMA Council on Legislation—Fred C. Rainey, M.D., Elizabethtown; AMA Council on Long-Range Planning—David B. Stevens, M.D., Lexington; and AMA Council for Graduate Medical Education—D. Kay Clawson, M.D., Lexington.
- Appointment of Lee C. Hess, M.D., Florence, as KMA's fourth Delegate to the AMA; and appointment of Donald C. Barton, M.D., Corbin, and Frank R. Pitzer, M.D., Hopkinsville, as Alternate Delegates to the AMA.
- Adoption of a policy statement regarding legal advertising in the *Journal of the Kentucky Medical Association.*

The Board members also heard reports on the Kentucky Medical Insurance Company; the KMA Insurance Agency, Inc.; the CITICARE Program; and a special presentation by a member of the KMA Committee on Impaired Physicians.

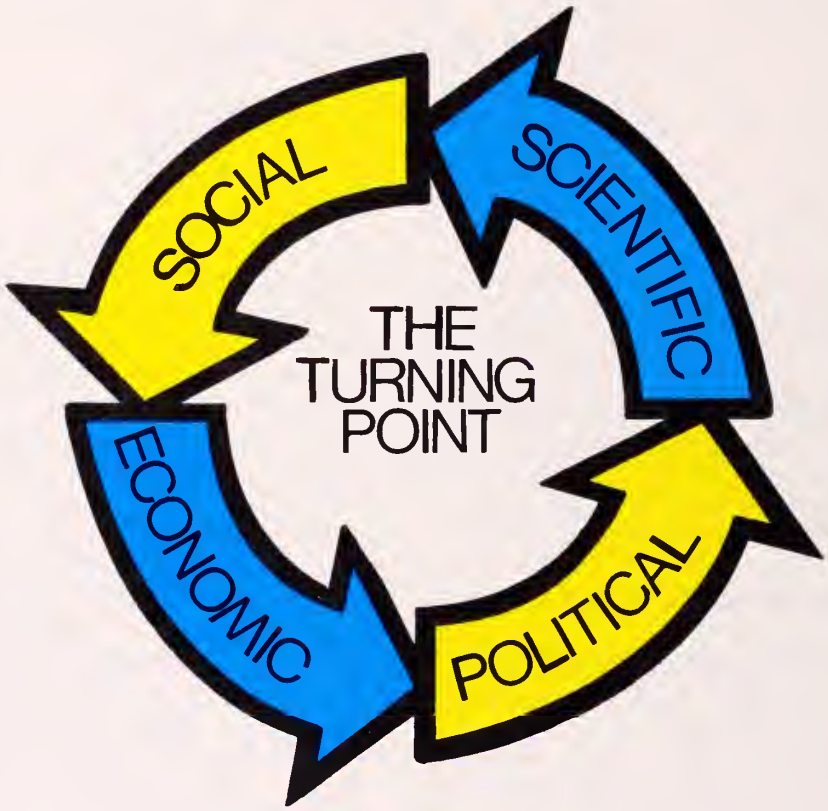
Thomas D. Stroud, Vice President of Kentucky Blue Cross and Blue Shield, presented rate renewal information for the KMA-endorsed Blue Cross/Blue Shield/Major Medical group plan for KMA members, and the Board selected one of three options offered. The Board members also approved recommendations of the Committee on Medical Insurance and Prepayment Plans to express concern to the Governor regarding the state employees' group plan, pointing out the possible lowering of the quality of medical care as a result of the contract negotiated.

The Board also requested additional information regarding the extent of physician participation on the Governor's Coalition of Payors to Address Health Care Costs.

The next meeting was set for April 13-14, 1983, at the KMA Headquarters Office in Louisville.

As a result of increased membership in the Kentucky Medical Association, the American Medical Association recently authorized the KMA to increase their delegate strength by one. On December 15, 1982, the KMA Board of Trustees elected Lee C. Hess, M.D., Florence, as Delegate and named Donald C. Barton, M.D., Corbin, and Frank R. Pitzer, M.D., Hopkinsville to the vacant Alternate Delegate slots.

The KMA Board of Trustees membership will increase to 28 members, as Bylaws stipulate that Delegates and Alternate Delegates to the AMA are members of the Board. The Board's appointments are on an interim basis until the House of Delegates election in September, 1983.



SEELBACH HOTEL, LOUISVILLE, KENTUCKY
MARCH 16-17, 1983



Connie S. Henderson

Wednesday Morning, March 16, 1983

Optional For Conference Participants

8:00 a.m. **Registration**
Grand Ballroom

9:00 a.m. **Financial Controls in Your Practice**
Connie S. Henderson, Chicago
Program Director, Department of Practice Management
American Medical Association

10:00 a.m. **Break**

11:45 a.m. **Lunch—Rathskeller**

Wednesday Afternoon, March 16, 1983
Grand Ballroom

12:30 p.m. **Presiding/Opening Remarks**
Dwight L. Blackburn, M.D.
President, Kentucky Medical Association

12:45 p.m. **What Doctor's Need to Know About Money Management and Investment**
Chris M. LeMay, Louisville
Institutional Investment Broker, Prudential Bache Securities

1:30 p.m. **The Future of Computers in Physician's Offices**
Connie S. Henderson, Chicago, Illinois
Program Director, Department of Practice Management
American Medical Association

2:30 p.m. **Break**

2:45 p.m. **Trends in Employee Benefits—A Business Perspective**
William J. O'Conner, J.D., CPA, New York
Vice President, Philip Morris, Inc.

3:15 p.m. **Trends in Reimbursement—A Payors Perspective**
Avil L. McKinney, Louisville, Kentucky
President, Blue Cross and Blue Shield of Kentucky, Inc.

3:45 p.m. **Frustrations of a Cost Conscious Physician**
Russell W. H. Kridel, M.D., Houston, Texas

4:30 p.m. **Adjourn**



Avil L. McKinney

Wednesday Evening, March 16, 1983

6:00 p.m. **Social Hour—Rathskeller**

6:45 p.m. **Dinner—Grand Ballroom**
Dwight L. Blackburn, M.D., Presiding

7:30 p.m. **Inside Report—Washington's Plans for Health Care**
Robert D. Novak, Washington, D.C.
Washington Columnist



Russell W. H. Kridel, M.D.



Robert D. Novak



Edward R. Annis, M.D.

Thursday Morning, March 17, 1983

7:30 a.m. **Registration**
Grand Ballroom

8:00 a.m. **Continental Breakfast**
Grand Ballroom Foyer
Richard F. Hench, M.D.
Chairman, Board of Trustees, Presiding

8:45 a.m. **Organized Medicine—Today and Tomorrow**
Edward R. Annis, M.D., Miami, Florida
Past President, American Medical Association

9:30 a.m. **Break**

9:45 a.m. **Professional Liability—A Look Into the Future**
Carl L. Wedekind, Jr., Louisville, Kentucky
President, Kentucky Medical Insurance Company

10:10 a.m. **Marketing Strategies for Private Practice**
Richard Endress, Chicago, Illinois
Program Director, Department of Practice Management
American Medical Association

11:10 a.m. **The Economic Outlook for Physicians**
Paul J. Feldstein, Ann Arbor, Michigan
Professor, Department of Hospital Administration and Department of Economics, The University of Michigan

12:00 p.m. **St. Patrick's Day Luncheon**
Rathskeller

Thursday Afternoon, March 17, 1983
Grand Ballroom

Robert C. Burkhart, M.D., Presiding
President, Kentucky Peer Review Organization

1:15 p.m. **Facing Future Realities—The Geriatric Imperative**
Anne Ramsay Somers, Piscataway, New Jersey
Professor, Environmental and Community Medicine and Family Medicine, Rutgers Medical School

3:00 p.m. **Break**

2:00 p.m. **The Future is Now—There Is No Status Quo**
John Elkins, Denver, Colorado
Trend Analyst
The Naisbitt Group

2:45 p.m. **Wrap Up With Questions and Answers**
Dwight L. Blackburn, M.D.

3:00 p.m. **Adjourn**



Paul J. Feldstein, Ph.D.



Richard Endress, Ph.D.



Anne Ramsay Somers, Ph.D.



John Elkins



William J. O'Conner, J.D., CPA

REGISTRATION LIMITED TO 300 PARTICIPANTS

Special Seelbach rates for participants—$50.00 single or double if reserved prior to February 20, 1983

The TURNING POINT Conference is open to all members of the Kentucky Medical Association, their spouses and other medically-related groups. A registration fee of $125.00 per person, or $200.00 for physician and spouse, will be charged and will include lunch, social hour and dinner on March 16, continental breakfast and lunch on March 17. Lodging reservations may be obtained by contacting The Seelbach Hotel at 800-626-2032 or 502-585-3200.

PLEASE REGISTER ME FOR THE CONFERENCE (INCLUDE PAYMENT WITH REGISTRATION FORM)

☐ Member ☐ Register me for the Bonus 2½ hour program on Wednesday morning

☐ Spouse _____

Name _____

Mailing Address _____

City _____ State _____ Zip Code _____ Phone _____

Return to: Kentucky Medical Association
3532 Ephraim McDowell Drive
Louisville, KY 40205

- This program has been reviewed and is acceptable for 9 Prescribed hours by the American Academy of Family Physicians.
- The Kentucky Medical Association has approved this program for 12½ hours of Category I Credit.

Handy tear-out page of current officers of Kentucky specialty groups: 1982-83

Kentucky Society of Allergy and Clinical Immunology—President: Ronald P. Moyer, M.D., S. W. Jefferson Professional Bldg., 9822 Third Street Road, Louisville, KY 40272

Kentucky Society of Anesthesiologists—President: George E. Webb, M.D., P. O. Box 35070, Louisville, KY 40232

Kentucky Chapter, American College of Chest Physicians—President: N. K. Burki, M.D., Ph.D., Pulmonary Division, Dept. of Medicine, University of Kentucky Medical Center, 800 Rose Street, Lexington, KY 40536

Kentucky Dermatological Society—President: Joseph L. Thompson, M.D., Professional Towers, 4010 Dupont Circle, Louisville, KY 40207

Kentucky Chapter, American College of Emergency Physicians—President: Anthony J. Suruda, M.D., 1055 Dove Run Road, Lexington, KY 40502

Kentucky Society of Otolaryngology, Head & Neck Surgery, Inc.—President: William G. Begley, M.D., 1030 Newman Drive, Bowling Green, KY 42101

Kentucky Academy of Eye Physicians and Surgeons—President: John E. Downing, M.D., 1403 Andrea Street, Bowling Green, KY 42101

Kentucky Society of Gastrointestinal Endoscopy—President: Nelson B. Rue, M.D., 1109 State Street, Bowling Green, KY 42101

Kentucky Chapter, American Academy of Family Physicians—President: Max A. Crocker, M.D., 915 S. Limestone, Department of Family Practice, Lexington, KY 40536

Kentucky Neurosurgical Society—President: Russell L. Travis, M.D., 152 West Zandale, Lexington, KY 40503

Kentucky OB-GYN Society, KOGS, Kentucky Section ACOG—President: Donald E. Edger, M.D., 2366 Nicholasville Road, Lexington, KY 40503

Kentucky Occupational Medicine Association—President: John F. Rose, M.D., 801 Barret Avenue, Louisville, KY 40204

Kentucky Orthopaedic Society—President: Mark O. Gladstein, M.D., 200 Doctors Office Building, 250 East Liberty Street, Louisville, KY 40202

Kentucky Society of Pathologists—President: Robert S. Howell, M.D., Jewish Hospital, 217 East Chestnut Street, Louisville, KY 40202

Kentucky Chapter, American Academy of Pediatrics—President: Thomas A. Courtenay, M.D., 518 Medical Towers North, Louisville, KY 40202

Kentucky Chapter, American College of Physicians—President: Carroll H. Robie, M.D., 3440 Medical Arts Bldg., Louisville, KY 40217

Kentucky Society for Plastic & Reconstructive Surgery—President: Gordon Tobin, II, M.D., 700 Children's Foundation Building, Louisville, KY 40202

Kentucky Psychiatric Association—President: Jesse Wright, M.D., Norton's Psychiatric Clinic, Norton's Children's Hospital, Louisville, KY 40202

Kentucky Association of Public Health Physicians—President: Barry Wainscott, M.D., Shelby County Health Department, P. O. Box 254, Shelbyville, KY 40065

Kentucky Chapter, American College of Radiology—President: William Daniel, M.D., Baptist Hospital, Corbin, KY 40701

Kentucky Chapter, American College of Surgeons—President: Charles H. Nicholson, M.D., 1221 South Broadway, Lexington, KY 40504

Kentucky Urological Association—President: Russell H. Davis, M.D., Pikeville Medical Building, Pikeville, KY 41501

NEWS

The Kentucky Medical Association will be sponsoring three Practice Management Workshops in March, 1983. The Workshops are conducted by the American Medical Association's Office of Practice Management. This year the Association will offer a one-day course for physicians on March 22nd called, "Computers in Private Practice." On March 23rd, two one-half day sessions on "Collections" will be held for medical assistants and on March 24 and 25, a two-day course entitled, "Starting Your Practice" will be held for new physicians. Each of these programs has limited registration and you are requested to contact the KMA Headquarters Office for additional information.

The Kentucky Medical Association, Department for Placement Services is now offering assistance to physicians seeking part-time employment and communities or physicians wishing to obtain temporary physician services. The Physician Placement Services, which formerly served as a clearing house of information for full-time physicians will now include assistance for those seeking part-time service. Those physicians wishing to offer their services and communities seeking these services should contact the Kentucky Medical Association, Placement Service Office, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205, or call (502) 459-9790.

The American Medical Association-Education and Research Foundation is offering scholarships in clinical nutrition to third- and fourth-year medical students who have completed the required clerkships in medicine, surgery, pediatrics, etc.

The scholarship program consists of four- to six-week clerkships in general, pediatric, and surgical nutrition offered by 21 medical schools across the country, throughout the year. A copy of the AMA-ERF *Description of Clerkship Programs, 1982* for Scholarships in Clinical Nutrition is available for student perusal in the Dean's office of all U. S. Medical schools.

Scholarships are only for students in schools that do not have clinical nutrition clerkships available, or do not have them available in their special area of interest. Students accepted to the program will receive a $700 award to defray living and traveling costs.

Deadlines for applications are: February 1, 1983 for clerkships from June to December 1983; August 1, 1983 for clerkships from December 1983 to June 1984. For application forms contact: Department of Foods and Nutrition, AMA, 535 North Dearborn Street, Chicago, Illinois 60610 or call 312/751-6514.

Johnson & Johnson, the makers of Tylenol, has announced a new triple safety-sealed, tamper-resistant package for Tylenol capsules.

The new package has glued flaps on the outer box, which must be forcefully torn free. Covering the cap and neck of the bottle is a tight plastic seal that must be torn to remove the cap. Finally, over the mouth of the bottle is a strong inner-foil seal that must be broken to reach the capsules.

Johnson & Johnson has offered to replace all Tylenol capsules that consumers threw away after the Chicago cyanide poisonings. Consumers can call a special telephone number, 1-800-232-2222, and receive a coupon good for $2.50 toward the purchase of any Tylenol product.

The AMA Program designed to provide patients—through their physicians—with written information about prescriptions is now underway. The series of Patient Medication Instruction sheets (PMI's) are designed to supplement the physician's oral instructions and will cover widely prescribed drugs. Eventually as many as 200 medications are expected to be included in the voluntary program. To order PMI's contact the AMA, P. O. Box 52, Rolling Meadows, Illinois, 60008.

The public has strong pro-physician attitudes on professional liability issues, according to a survey conducted by the AMA Group on Public and Federation Relations. Most people do not think that malpractice suits usually are justified, although 47% hold the opposite view. A majority (61%) of the public respondents in 1,504 telephone interviews favored limits on malpractice awards. Forty-seven percent of the public respondents think current malpractice awards are too high, while 7% think awards are not high enough. Of the 1,000 physician respondents in the survey, 92% rated better physician-patient rapport as a very effective method of reducing professional liability risk. On average, physicians in the survey estimated that 22% of malpractice claims are the result of actual negligence.

Application for Scientific Exhibits

1983 Annual Meeting **Kentucky Medical Association**

Ramada Inn/Bluegrass Convention Center **Louisville, Kentucky** **September 20, 21, 22**

1. Title of exhibit _____

2. Name(s) of exhibitor(s) _____

 Address _____

 Professional title _____

3. Institution if other than exhibitor _____

4. Amount of backwall footage required _____
 (The draped booth has 4' side walls. This footage should not be included in backwall footage required.)
 SHELF DESIRED? _____ (Table 2' deep X width of backwall footage) Electrical outlet desired _____

5. Will summary printed matter be available or obtainable for the interested physician? _____

6. Indicate sources of assistance provided to you in connection with this exhibit _____

7. Has this exhibit been displayed before? If so, when & where? _____

8. It is required that you attach a rough sketch or photograph and a brief outline of your exhibit to include: (a) content of the presentation, and (b) the method, eg., equipment to be used.

Date _____ _____
Signature of Applicant

- **KMA provides, without cost to the exhibitor, one 2 ft. Table as shelving, bracket lights and a title sign.**
- **Spotlights, view boxes, furniture, decorations, etc., may be furnished by the exhibitor or may be rented, if desired, by applying directly to the George E. Fern Company, 328 Louisville Air Park, Louisville, Kentucky 40213.**
- ***Commercial* exhibit materials and handouts are prohibited in the Scientific Exhibit area.**
- **Transportation and erection costs are the responsibility of the exhibitor.**
- **Exhibit *must be attended* during intermissions to answer physicians' questions. It is also desirable to have someone in attendance throughout the program.**
- **Equipment which will create noise must not be used during the general sessions and, at other times, must be controlled by head or earphones or a muffling device.**
- **Exhibit must be dismantled and removed by 4: P.M., Thursday, September 22, 1983.**
- **Exhibit space is *strictly limited* to footage and space allotted. *No* exhibit may extend into the aisle.**
- **The Bluegrass Convention Center and the Kentucky Medical Association or its agents cannot guarantee against loss or damage and will assume no liability for damages nor guarantee the exhibitor against loss of any kind. The exhibitor agrees, with the Association, to be responsible to the Bluegrass Convention Center for damages that may occur as a result of the exhibitor's use of the facility.**

ACCREDITATION

KAFP allows one credit hour for each hour of participation and presentation of scientific exhibits up to 15 hours. AMA allows up to 10 hours for AMA Category 4 credit.

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Plan to Attend THE TWENTY-NINTH ANNUAL SYMPOSIUM ON CARDIOVASCULAR DISEASES

Executive West—Louisville, Kentucky—March 9-10, 1983

Sponsored by:

Greater Louisville Division, American Heart Association
University of Louisville School of Medicine
Jefferson County, Kentucky Academy of Family Physicians

Laman A. Gray, Jr., M.D., Chairman

March 9, 1983 (Wednesday)

MORNING SESSION

8:00-8:50 a.m.	Registration
9:00-10:00 a.m.	BERNARD D. ROSENBLUM MEMORIAL LECTURE "The Role of Coronary Angioplasty in the Management of Coronary Artery Disease" Andreas R. Gruentzig, M.D., Professor of Medicine (Cardiology and Radiology) Director, Interventional Cardiovascular Medicine Emory University School of Medicine Atlanta, Georgia
10:10-10:30 a.m.	Coffee Break and Exhibits
10:30-11:10 a.m.	"Importance of Myocardial Ischemia in Congenital Heart Disease" Julien I.E. Hoffman, M.D., Professor of Pediatrics and Physiology University of California San Francisco, California
11:20-12:00 noon	"Coronary Clot Lysis in Acute Myocardial Ischemia" Andreas R. Gruentzig, M.D.
12:10-2:00 p.m.	Lunch and Exhibits

AFTERNOON SESSION

2:00-2:40 p.m.	"The Role of Ambulatory Monitoring and Exercise Testing in the Management of Arrhythmias" R. Joe Noble, M.D., Consulting Cardiologist, St. Vincent Hospital and HealthCare Center, Clinical Professor of Medicine, Indiana University Indianapolis, Indiana
2:50-3:35 p.m.	"New Drugs in the Management of Angina Pectoris: Newer Beta Adrenergic Antagonists" R. Joe Noble, M.D.
3:45-3:50 p.m.	Break and Exhibits
3:50-4:30 p.m.	"Dual Chamber Pacing: Why, When and How" W. Robin Howe, M.D., Assistant Professor of Surgery (Thoracic and Cardiovascular Surgery) University of Louisville School of Medicine Louisville, Kentucky

Time for questions and answers included in each presentation.

March 10, 1983 (Thursday)

MORNING SESSION

8:00-8:50 a.m.	Registration
9:00-9:40 a.m.	"New Studies in Low Dose Treatment for Hypertension" Barry J. Materson, Associate Professor of Medicine University of Miami, Miami, Florida
9:50-10:30 a.m.	"New Therapy for Treatment of Congestive Heart Failure" Norman K. Hollenberg, Professor and Director of Physiologic Research at Harvard Medical School Cambridge, Massachusetts
10:40-11:00 a.m.	Coffee Break and Exhibits
11:00-11:40 a.m.	"Pharmacology and Cardiac Action of Calcium Channel Blockers" Michael Lesch, M.D., Magerstadt Professor of Medicine Chief of Cardiology, Northwestern Medical School, Chicago, Illinois
11:50-12:30 p.m.	"Analysis of the Significance of the VPB in Cardiac and Noncardiac Patients" Michael Lesch, M.D.
12:40-2:00 p.m.	Lunch and Exhibits

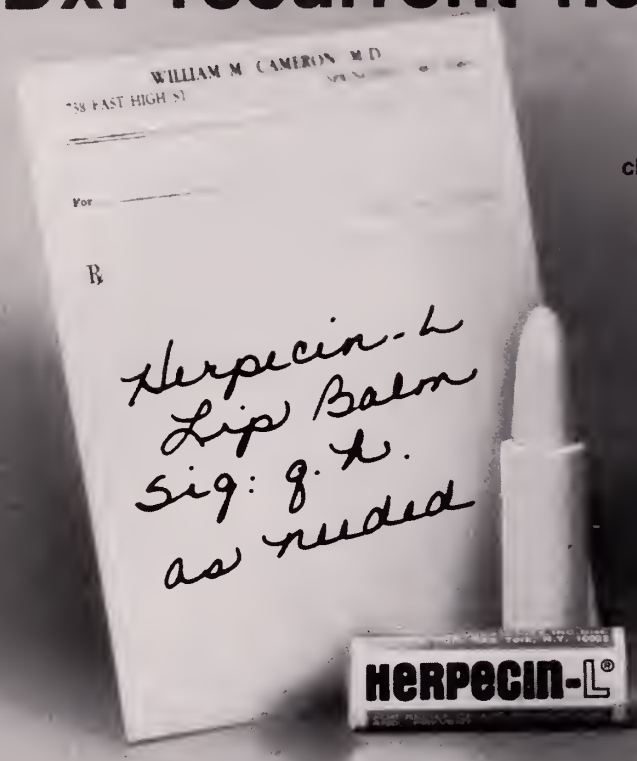
AFTERNOON SESSION

2:00-2:40 p.m.	"Ten-Year Results of Myocardial Revascularization" Floyd D. Loop, M.D., Cleveland Clinic Foundation Cleveland, Ohio
2:50-3:30 p.m.	"Results of Aortic Valve Replacement Combined with Coronary Artery Surgery: The Cleveland Clinic Experience" Floyd D. Loop, M.D.
3:50-4:30 p.m.	"Comparative Evaluation of Commonly Used Radionuclide Studies" Nancy C. Flowers, M.D., Professor of Medicine Head, Division of Cardiology, University of Louisville School of Medicine, Louisville, Kentucky
	Time for questions and answers included in each presentation.

Registration: Physicians—$50.00 pre-registration; $60.00 desk registration; Nurses—$10.00; Medical Students and House staff—no charge. For additional information, please contact the Greater Louisville Division of the American Heart Association, 207 Speed Building, Louisville, Kentucky 40202, or telephone (502) 587-8641.

As an organization accredited for continuing medical education, the Louisville Area CME Consortium, Inc., designates this continuing medical education activity as meeting the criteria for 11 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association. This program has been reviewed and is acceptable for 11 Prescribed Hours by the American Academy of Family Physicians.

Dx: recurrent herpes labialis



"Herpecin-L Lip Balm is **the treatment of choice** for peri-oral *herpes.*" GP, New York

"In the management of *herpes labialis,* Herpecin-L is a **conservative approach** with **low risk-high benefit.**" Derm., Miami

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In Kentucky, "HERPECIN-L" Cold Sore Lip Balm is available at all *Begley, SupeRx* and *Taylor Drug Stores* and other select pharmacies.

Digest of Proceedings KMA Board of Trustees September 23, 1982

Acting as Temporary Chairman, KMA Secretary-Treasurer S. Randolph Scheen, M.D., introduced the newly elected members of the Board of Trustees and the new officers: James B. Holloway, Jr., M.D., Lexington, President-Elect; Charles C. Smith, Jr., M.D., Louisville, Vice President; Albert H. Joslin, M.D., Owensboro, Trustee, Second District; R. Kendall Brown, M.D., Georgetown, Trustee, Ninth District; and Garner E. Robinson, M.D., Ashland, Trustee, Thirteenth District.

The Board then elected the Executive Committee members to serve with the President, President-Elect, Vice President, and Secretary-Treasurer for the 1982-83 Associational year. Richard F. Hench, M.D., Lexington, was appointed Chairman of the Board for a second term, and Donald C. Barton, M.D., Corbin, was named Vice Chairman. Robert E. Smith, M.D., Covington, and Wally O. Montgomery, M.D., Paducah, were also named to the Executive Committee as Trustees-at-Large.

Thomas L. Heavern, Jr., M.D., Highland Heights, was appointed Parliamentarian for a one-year term. The following were reappointed to the KMA Insurance Agency, Inc., Board of Directors: Dwight L. Blackburn, M.D., Berea; Ballard W. Cassady, M.D., Pikeville; Richard F. Hench, M.D., Lexington; James B. Holloway, Jr., M.D., Lexington; S. Randolph Scheen, M.D., Louisville; Robert G. Cox, Louisville; Carl L. Wedekind, Jr., Louisville; and Morton C. Bell, Louisville.

The Board reviewed the Executive Committee's recommendations for committee personnel, made appropriate changes and additions, and then approved the committee membership for the 1982-83 Associational year.

A decision was made to hold the 1983 KMA Annual Meeting at the Ramada Inn/Bluegrass Convention Center in Louisville with the scientific sessions beginning on September 20.

The next meeting was set for December 15-16, 1982, in Louisville.

NEED A SPEAKER? . . .

for your next hospital staff, county society or other meeting?

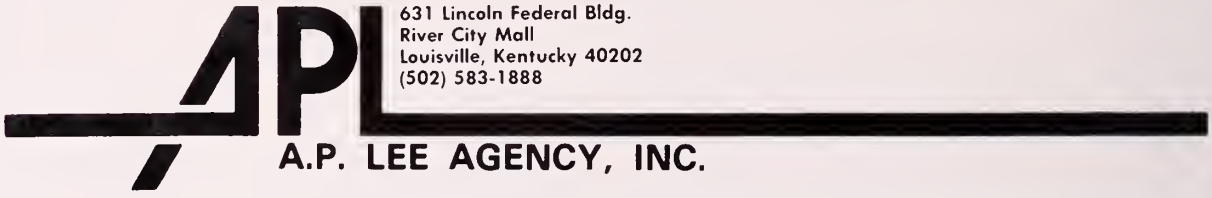
Contact the KMA Committee on Impaired Physicians.

(502) 459-9790

**Another year has come and gone—
they do slip up on one!**

**How long has it been since you
reviewed your disability coverage?**

*KENTUCKY MEDICAL ASSOCIATION
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Computers in Private Practice

First in a series of articles on Practice Management

See page 184

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PRESIDENT'S PAGE

Future Medicine—Rockwells or Orwells

There is no question that Norman Rockwell has had a dramatic effect on the public's perception of medical practice. Rockwell's drawings have probably had as much to do with the image of the physician as all the publicity and technological advances generated by medical science, or the news media and press.

At the other end of the spectrum is George Orwell's "1984." The book highlights a vast array of gadgetry which was truly the stuff of science fiction in 1949. From our perspective, "1984" also serves to highlight a potential division between patient and physician. As with "Big Brother," we can easily become impersonal and uncommunicative with our patients. We can become "technocrats," serving merely as a conduit for statistics generated by computers and modern equipment.

Fortunately, most of the world remains free from the overall scenario of "1984." However, that certainly does not mean that the pace of change has slowed, particularly in the area of medical care and the delivery system through which it is rendered. Those of us who practice in more rural settings may be tempted to ignore certain aspects of this startling transition. Citicare, Preferred Provider Organizations, Emergi-centers, HMO's, Free Standing Surgery and Birthing Centers, dual type emergency rooms, can easily become "buzz words," of which we take only casual notice, preferring instead to leave such problems to our brethren in urban areas. However, you can rest assured that in the near future those concepts will appear on all our doorsteps. Many experts are indicating that rural areas are "ripe" for this type of development and plans for similar pilot projects are already being designed. These sorts of projects will shape the future of medicine, and societal considerations dictate that they are neither passing fancies nor aberations which will soon vanish. Eventually they will have an effect on all physicians, regardless of their location, specialty or type of practice.

We can't ignore the fact that cost has become an overriding concern to Employer/Payors. On the other hand, patients are frequently frustrated with the amount of time spent waiting in a doctor's office. As a result, innovations in the economic end of medical practice focus on getting the patient in and out, at a supposedly discount price.

If we follow trends in other businesses and economic activities, we note that access and speed are the bywords in today's commercial world. Witness the explosion of small grocery chains, auto shops, and various other mercantile enterprises. Predictions abound that the "private practice" of medicine will not survive the 1990's and that the "solo" practitioner will be labeled the dinosaur of medicine.

Can it be that a more transitory and mobile American public is willing to accept an impersonal medical relationship as the price of easy accessibility and rapid medical treatment? Some "entrepreneurs" definitely think so, and they've opted for change as well as the potential of profit. They cater to the "new" patient and the rapid-fire service he demands. Somewhere along the line the old term "competition" reared

its head and the explosion within the physician population greased the skids. Mix all this together and add to it the impersonal, yet marvelous technological advances available, and a new age of medicine is born.

Futurist Lelan Kaiser, Ph.D., recently chose strong words to illustrate his perception of the current delivery system: "The provider-oriented practice says, 'Come and try to find us. Be glad we're here. Listen while we tell you what's wrong and what you need. Follow our instruction carefully. Then pay your bill and go home.' " Terming this the "omnipotent" approach, Doctor Kaiser said that "its days are over in medicine."

Frankly, I believe most physicians would be glad to see this approach disappear, if in reality it ever existed. The "doomsday" forecasters, who predict a complete removal of the physician-patient relationship, fail to grasp the real reason for the new trends. In fact, the acceptance of supermarket medicine is a consumer/patient reaction for our benefit . . . to let us know that patients are not numbers, nor are they to be treated lightly.

With that in mind, those among us who realize the need for physicians who will provide **continuing** care to patients and their families must redouble our efforts. Patients don't expect physicians to bow and cater to their every whim, nor do they necessarily expect to be "buddies." Instead, they want and need a relationship built on mutual respect and a personal and professional interest in their medical and emotional concerns.

If the preceding paragraphs sufficed to stir your interest in change, they have served a useful purpose. Regardless of how you feel about it, a transformation is occurring in medicine. Whether the imagery of Rockwell or Orwell prevails will in a large measure depend on our recognition and awareness of patient needs. Future historians will reflect not only on the modifications to the health care delivery system which occurred in the 1980's, but also on the medical community's reaction to them.

For those reasons, I want to invite you to attend "The Turning Point," which KMA, in cooperation with the Kentucky Peer Review Organization, Kentucky Medical Insurance Company and the KMA Insurance Agency, is presenting on March 16-17, 1983, at the Seelbach Hotel, Louisville, Kentucky. This issue contains a list of several featured speakers, as well as the agenda, for what I believe will be an outstanding program.

Dwight L. Blackburn, M.D.
KMA President

The Journal Of The Kentucky Medical Association

March 1983 Volume 81 Number 3

SCIENTIFIC

Hypertrophic Pulmonary Osteoarthropathy and Pachydermoperiostosis

L. EDWARD ROBERTS, M.D. AND ROLANDO BERGER, M.D.

Hypertrophic pulmonary osteoarthropathy (HPO) is an easily recognizable syndrome which can arouse clinical suspicion that an underlying malignancy is present. We present a case of HPO with the full blown clinical picture of arthritis, clubbing, bony changes, skin changes and gynecomastia. A dramatic resolution of symptoms occurs following percutaneous biopsy of the lung mass and subsequent surgical resection.

ALTHOUGH hypertrophic pulmonary osteoarthropathy (HPO) is well documented in the literature,[1,2,3] it is a relatively uncommon syndrome and for this reason may be overlooked by the general clinician. The "full-blown" clinical picture of bony changes, with associated skin changes is even rarer. The following is a case report of classic HPO and its dramatic response to therapy.

Case Report

A 60-year-old metal worker was self-referred to the Veterans' Hospital after an 18-month history of bilateral joint "stiffness" of both upper and lower extremities. Three months prior to admission the patient had seen his private physician after noting swelling and arthralgias in the hands, knees and ankles which prevented him from working. A trial of Indomethacin gave him fair relief. Two months prior to admission he had the onset of painful symmetrical swelling of his breasts and swelling of his distal fingers. He gave a 70-pack-year history of cigarette smoking, but denied cough, fever or anorexia. He had no known exposure to asbestos, but had worked with numerous metals and chemicals.

Physical exam revealed normal vital signs. He was noted to have a deeply furrowed brow with woody edema of the legs and hands. Breast exam revealed discrete quarter-sized tender masses palpable under each nipple, without an expressible discharge. Cardiopulmonary, abdominal and GU exams were normal. Extremities revealed marked clubbing of the fingers and toes. Other than generalized weakness and a poor hand grip secondary to pain, his neurologic exam was normal.

Electrolytes, BUN and glucose were normal. Albumin, calcium, phosphorus and uric acid were within normal limits. Alkaline phosphatase was 178 (normal $<$ 110) and fractionation revealed this to be heat labile (of bony origin). White count was 9,700 with a normal differential.

From Mount Sterling, Kentucky 40353



Fig. 1: Admission chest x-ray revealing a right lower lobe lung mass.



Fig. 2a: Hand x-ray showing periosteal reaction.

Platelet count was 600,000 and hematocrit was 38.2% with normal indices. His sedimentation rate was 50. VDRL, rheumatoid factor, T_3 and T_4 were all normal. EKG and urinalysis were normal. Chest X-ray seen in Figure I revealed a rounded density in the right lower lobe and fibronodular and calcific changes in the right upper lung. A PPD skin test was positive with 14 millimeters of induration, and fungal titres were negative. Multiple sputum cultures and smears for AFB were negative. Pulmonary function tests were compatible with moderate obstructive lung disease with a FEV_1 of 1.7 liters. X-rays of the hands, arms and legs are shown in Figure 2 and are compatible with HPO. A ^{99m}Tc-Pyrophosphate bone scan shown in Figure 3 is classic for HPO with diffuse, symmetrically increased activity over the periosteal region in the lower legs, ankles and wrists. Liver-spleen and brain scans were normal. Electromyography and nerve conduction studies were within normal limits. A biopsy of the patient's skin overlying his right shin revealed thickening of collagen bundles and were more fibrillar than normal. Chronic inflammatory cells were scattered throughout the dermis, most markedly in the dermal papillae. Small vessels with thickened walls were also seen in the dermal papillae. These changes were interpreted to be suggestive of pachydermoperiostosis. On 6/15/79, a fluoroscopically guided percutaneous needle biopsy yielded cytologies positive for cancer, but without a definitive cell type. An unexpected result was a marked relief of the patient's arthralgias following the needle biopsy.

On 6/27/79, the patient underwent thoracotomy with resection of a 3.5 cm. nodule from the anterior surface of the right lower lobe. The tumor revealed adenocarcinoma but the mediastinal lymph nodes were negative for metastasis. Three days following thoracotomy, his arthralgias had completely disappeared. On 8/20/79 he returned to work. Although his finger clubbing persisted, the swelling previously noted in his legs, ankles, hands and wrists had disappeared.



Fig. 2b: Forearm x-ray showing diffuse periosteal reaction especially along the shaft of the radius.



Fig. 2c: Diffuse periosteal reaction along the length of the tibia and fibula.

At one and one half years of follow-up the patient had quit smoking and returned to his job full-time. He had gained 35 pounds and was pain free and feeling well. Clubbing had disappeared except for the last two fingers of both hands. We are not aware of a previous description of asymmetric persistence of clubbing and expected the clubbing to resolve uniformly. In the follow-up x-rays no significant change was noted, however, the bone scan shown in Figure four does show quite an improvement with only minimal abnormal isotope uptake. This scan was obtained three months after the initial scan.

Discussion

The hallmark of HPO is painful swelling of joints—usually wrist, elbow, knee or ankle. This is frequently associated with early morning stiffness and, as in our patient, may respond well to anti-inflammatory drugs such as aspirin or In-

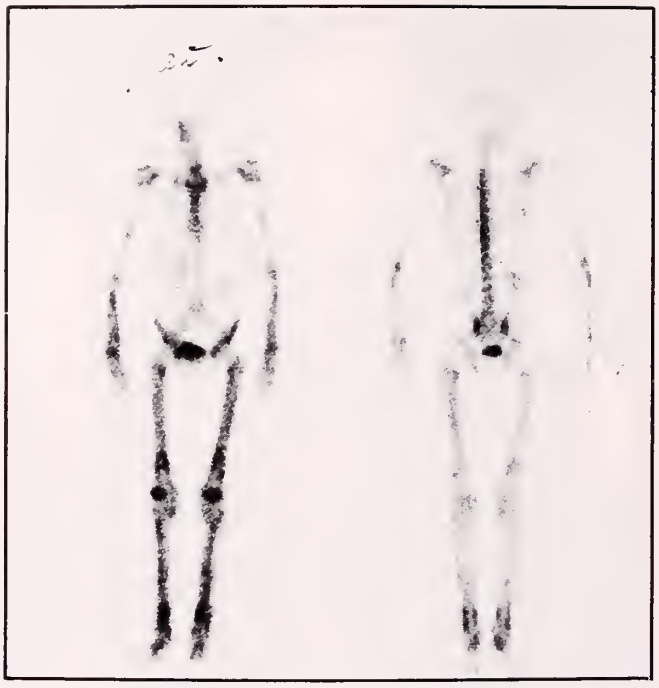


Fig. 3: Total body bone scan showing marked increase in uptake especially in the ankles, distal legs, wrists and forearms.

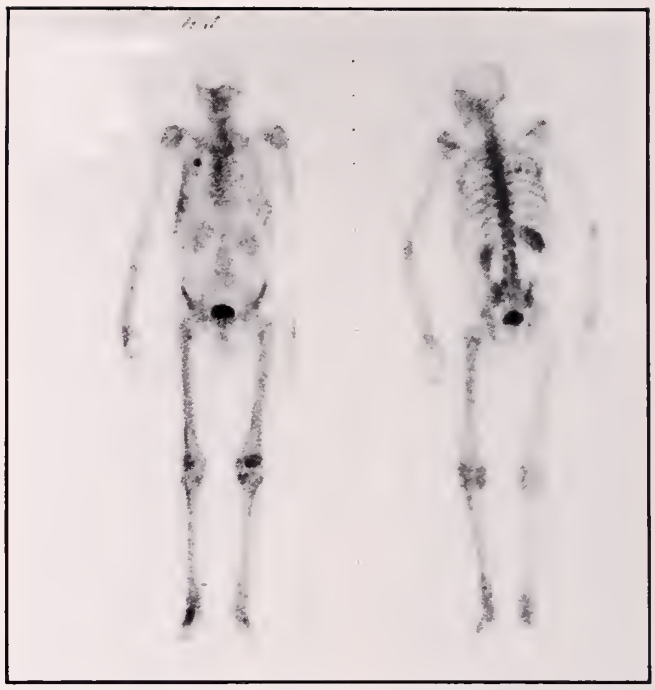


Fig. 4: Repeat total body bone scan three months later showing much less uptake in the effected bones.

domethacin.[4,5] This may lead to the incorrect diagnosis of rheumatoid arthritis. However, aspiration of joint fluid could serve to differentiate the two, if they were otherwise inseparable clinically. Joint fluid from patients with HPO is characterized as "non-inflammatory" with normal white cell counts.[6] One characteristic of the joint fluid is its tendency to clot spontaneously which is usually seen only in inflammatory effusions. This may be secondary to increased levels of fibrinogen in the fluid.

HPO is most commonly seen with intra-thoracic neoplasms, but may be seen with a variety of other conditions including thyroid acropachy, cystic fibrosis, pulmonary abscess, bronchiectasis, Hodgkin's disease, ulcerative colitis, GI malignancies and endocarditis.[7,8] The incidence of HPO complicating bronchogenic carcinoma has been reported to range from less than 1% to as high as 12%. Nearly 80% of all lung lesions associated with HPO are bronchogenic carcinomas, and pleural tumors account for another 10%.[9]

Although gynecomastia may be seen with lung tumors in the absence of HPO, it is frequently seen in association with pulmonary tumors and HPO.[10] A further association only rarely seen, is progressive coarsening of the facial features with increased greasiness of the skin. The skin is thrown into heavy transverse folds on the forehead and the nasolabial folds become deep and sharp. When these changes are seen with HPO it is labelled pachydermoperiostosis.[7] Our patient had these skin changes and they have now completely resolved.

The etiology of HPO remains obscure in spite of nearly 50 years of study. Theories have included altered neuro-endocrine stimulation secondary to the tumor.[11,12] Increased blood flow in the affected extremities has been documented and reversed with transection of thoracic nerve roots.[7,13] Indeed there are many case reports of simple thoracotomy, or so-called "sham" procedures resulting in relief of symptoms. This has occurred even without the actual tumor being resected. Simple transection of the vagus nerve has also been reported to result in

relief of osteoarthropathy symptoms.[14] Intercostal nerve section, hypophysectomy and radiotherapy have also been reported to reverse the pain of HPO;[15,16] however, we could not find any reference in the literature of percutaneous biopsy relieving pain as was demonstrated in our patient.

This symdrome is more than a mere medical curiosity. A significant number of patients are disabled by the arthralgias of HPO and have excellent hopes of obtaining some relief even if their tumor is non-resectable. Secondly, the appearance of arthralgias and swelling should be a signal to the physician that malignancy must be ruled out. Our patient's symptoms began a full 18 months before his diagnosis was finally made; it is conceivable that HPO could be a blessing in disguise, if it results in early resection of an otherwise asymptomatic lung cancer.

References **1.** Vogl A and Goldfischer S: Pachydermoperiostosis, Primary or Idiopathic Hypertrophic Osteoarthropathy. 33:166-187, Aug. 1962. **2.** Mendlowitz M: Clubbing and Hypertrophic Osteoarthropathy. *Medicine* 21:269-306, 1942. **3.** Hammarsten JF and O'Leary J: The Features and Significance of Hypertrophic Osteoarthropathy. *Arch Intern Med* 99:431-441, March 1957. **4.** Case 38—1978: *N Engl. J Med,* 9/28/78 299:708-714. **5.** Calabro JJ: Cancer & Arthritis. *Arthritis Rheum* 10:553-567, 1967. **6.** Schumacher HR, Jr: Articular manifestations of hypertrophic pulmonary osteoarthropathy in bronchogenic carcinoma: a clinical and pathologic study. *Arthritis Rheum,* 19:629-636. **7.** Vogl A and Goldfischer S: Pachydermoperiostosis, *AJM,* 8/62, 33:166-187. **8.** Trever, RW: Hypertrophic osteoarthropathy in association with congenital cyanotic heart disease. Report of two cases *Ann Intern Med,* 1958, 48:660-668. **9.** Coury C: Hippocratic fingers and hypertrophic osteoarthropathy, a study of 350 cases. *Br J Dis Chest,* 54:202-209, Jul 1960. **10.** Hammarsten JF and O'Leary J: The features and significant of hypertrophic osteoarthropathy. *Arch Intern Med,* 99:431-441, Mar 1957. **11.** Dupont B, Høger I, Borgeskov S, et al: Plasma growth hormone and hypertrophic osteoarthropathy in carcinoma of the bronchus. *Acta Med Scand,* 188:25-30, 1970. **12.** Hansen JL: Rheumatoid syndrome in intrathoracic lesions: vagal reflex or not? Proceedings of the 3rd International Congress for Diseases of the Chest, p. 631. Barcelona 1954. **13.** Holding and Brodey: Pulmonary Hypertrophic Osteoarthropathy. *Lancet* 2:1269, 1961. **14.** Flavell G: Reversal of Pulmonary Hypertrophic Osteoarthropathy by Vagotomy, *Lancet,* 2/11/56, pp. 260-262. **15.** Holman CW: Osteoarthropathy in lung cancer: disappearance after section of intercostal nerves. *J Thorac Cardiovasc Surg,* 45:679-681, May 1963. **16.** Steinfeld AD and Munzenrider JE: The Response of Hypertrophic Pulmonary Osteoarthropathy to Radiotherapy. *Radiology,* 113:709-711, Dec 1974.

Gastrointestinal Metastases From Carcinoma of the Breast

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Gastrointestinal metastases from carcinoma of the breast are observed frequently at autopsy but are recognized rarely in the clinical setting. To better understand this aspect of the disease this report presents three exemplary cases of intra-abdominal metastases from carcinoma of the breast and reviews 35 cases from the literature. The most frequent presenting symptoms are abdominal pain (31%), vomiting (31%) and nausea (25%). In the case of gastric metastases a "linitis plastica" picture is the most frequent radiographic finding (43%). Endoscopy is of little diagnostic value and definitive diagnosis usually requires laparotomy. These metastases are responsive to therapy and survival does not appear to be different for the subset of patients with intra-abdominal metastases.

CARCINOMA of the breast is a chronic, systemic disease with protean manifestations. While gastrointestinal and peritoneal metastases are frequently found at post-mortem examination, they rarely produce sufficient symptoms to lead to ante-mortem diagnosis. When symptoms are present from gastrointestinal metastases they may be subtle or mimic more commonly occurring situations such as peptic ulcer disease, gastritis or untoward effects from chemotherapy. Gastrointestinal metastases from carcinoma of the breast may occur more frequently than previously recognized and, because of the similarities of symptoms to other nonmalignant conditions, early diagnosis and management require a high "index of suspicion" in the proper clinical setting. To better understand this aspect of carcinoma of the breast this report presents three exemplary cases and reviews 35 cases from the literature.

Case Reports

Case 1: A 37-year-old woman underwent a modified radical mastectomy for an upper outer quadrant infiltrating ductal carcinoma metastatic to two regional lymph nodes. Estrogen receptor status was not determined. Because no other evidence of metastatic disease was found she was started on adjuvant chemotherapy with cytoxan, methotrexate and 5-fluorouracil (CMF). Adjuvant therapy was planned for two years but the patient withdrew from therapy after receiving 10 monthly cycles. While lost to medical follow-up she did well for 33 months at which time she consulted her physician for evaluation of back pain. A radionuclide bone scan revealed multiple abnormal areas suggestive of metastatic disease including several ribs and the body of the 11th thoracic vertebra. No other metastatic disease was found by physical examination, chest radiograph or liver enzymes. Subsequently she underwent oophorectomy. At surgery multiple small tumor nodules were seen involving the peritoneum and visceral surfaces. Biopsy of the nodules confirmed metastatic carcinoma of the breast. She was followed closely on no therapy for three months after oophorectomy with no progression of disease. Because her back pain and vertebral metastasis were not resolving she was started on chemotherapy with CMF. This produced rapid relief of pain and she did well for 10 months on CMF.

At this time she developed pain in several ribs and in the lumbar spine. Chest radiograph and radionuclide liver scan were normal. Radionuclide bone scan showed marked progression of disease from the previous scan with abnormal areas in several ribs, sternum, lumbar and thoracic spine, right humerus and skull. Radiographic correlation with the bone scan confirmed the presence of lytic lesions in these

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areas. Computerized tomographic scan of the abdomen and pelvis failed to demonstrate metastatic disease or ascites. Subsequently therapy was changed from CMF to adriamycin and vincristine every three weeks. She experienced rapid relief of bone pain and is doing well after seven months of therapy.

Case 2: A 71-year-old woman underwent a modified radical mastectomy for infiltrating ductal carcinoma of the right breast metastatic to two axillary nodes. The primary tumor was negative for estrogen receptors. She received no adjuvant therapy. During the ensuing year her functional status declined and she experienced 70 pounds weight loss. She developed a one month history of post-prandial vomiting without antecedent nausea. Vomiting was precipitated by ingestion of solids and liquids and emesis resembled ingested contents without hematemesis. She was admitted to hospital for evaluation. Physical examination was remarkable only for signs of weight loss, dehydration and a firm, non-tender 2 cm. mass in the upper outer quadrant of the left breast that was suspicious for malignancy. Serum chemistries and enzymes were normal except for decreased total protein and albumin and elevated LDH and alkaline phosphatase. Chest radiograph revealed the heart and lungs to be normal but numerous lytic lesions were seen in ribs suggestive of metastatic disease. Esophagogastroscopy was attempted. The scope passed normally to 33 cm. but could not be progressed further because of marked esophageal stenosis. Barium swallow showed a rigid distal esophagus and delayed filling of the stomach. The stomach demonstrated a linitis plastica appearance. Radionuclide scan of the liver revealed multiple focal defects suggestive of metastatic disease.

Biopsy of the breast mass revealed infiltrating ductal carcinoma. Estradiol receptor content was 21 fmol (positive considered to be greater than 8 fmol).

Exploratory laparotomy revealed a rigid, contracted stomach and lower esophagus due to heavy infiltration by tumor. Biopsy of an omental metastasis revealed carcinoma that was histologically identical to the primary breast malignancy.

Treatment with CMF and Tamoxifen produced prompt improvement manifested by increased oral intake, resolution of vomiting and weight gain. She withdrew from chemotherapy after three monthly cycles and was continued on Tamoxifen. Her gastrointestinal symptoms recurred during the month following cessation of chemotherapy and she expired four months following initiation of therapy. Post-mortem examination was not performed.

Case 3: A 59-year-old woman underwent modified radical mastectomy for infiltrating ductal carcinoma of the breast metastatic to one axillary node. She received no adjuvant therapy and did well for three years post-operatively. Subsequently she developed anorexia, weight loss and increasing abdominal girth. On admission to hospital her physical examination was remarkable for signs of weight loss and tense ascites. Pelvic examination was normal. Serum chemistries and enzymes were normal except for decreased total protein and albumin. Radiographic evaluation of the upper gastrointestinal tract with barium contrast revealed a normal esophagus. The stomach was rigid and non-distensible and displayed several small mucosal irregularities. The stomach appeared to be involved by an infiltrative process. Duodenum and jejunum were normal.

At exploratory laparotomy she was found to have extensive intra-abdominal carcinomatosis and ascites. The pelvic organs were normal. Biopsy of metastatic implants revealed carcinoma histologically identical to her original breast carcinoma.

Treatment with CMF and Tamoxifen resulted in rapid resolution of ascites and in subsequent months she surpassed her original weight and returned to normal functional status with no evidence of disease by physical examination or radiographic studies. Repeat UGI series after one year of therapy was normal. She is alive and free of demonstrable disease at 18 months from initiation of therapy.

Discussion

Gastrointestinal metastases from carcinoma of the breast are found frequently at post-mortem examination. The incidence of GI metastases in

autopsy series ranges from 7 to 18%.[1-3] Invasion of the stomach and colon occur with equal frequency.[4]

The nature of GI metastases in ante-mortem series is less well documented. This may reflect the fact that symptoms may be subtle and non-specific and may mimic other non-malignant problems such as gastritis or peptic ulcer disease or may resemble the GI side effects of chemotherapy.[5] Jaffe[5] found abdominal symptoms to be absent in 46% of 28 patients found to have gastric metastases at autopsy.

To better characterize this clinical aspect of the disease 35 cases of carcinoma of the breast metastatic to the gastrointestinal tract were reviewed from the literature.[1-14] This series from the literature includes only patients whose GI metastases or symptoms were demonstrable ante-mortem. Strictly autopsy series were excluded from the review. There were 34 women and one man. Ages at diagnosis ranged from 33 to 84 years with a mean of 54 years. The interval from the original diagnosis of carcinoma of the breast to the onset of GI symptoms was evaluated in 32 patients and ranged from less than one year to 17 years with a mean of 3.6 years.

Presenting GI symptoms were evaluable in 32 patients. The most common symptoms were abdominal pain (31%), vomiting (31%), nausea (25%), hematemesis (19%), melena (15%), dysphagia (15%) and weight loss (12%). Other symptoms included weakness (9%), anorexia (6%), altered stools (6%), constipation (3%), abdominal distention (3%) and acute abdomen (3%). In four patients the presence of GI metastases was established incidentally at laparotomy. Indications for surgery in these four patients was adrenalectomy (one patient), adrenalectomy and oophorectomy (one patient), acute abdomen (one patient) and cholecystectomy (one patient).

Twenty-one patients were evaluated with UGI series. The most common radiographic abnormality was gastric rigidity (43%). Other findings included gastric ulcer (24%), diminished gastric peristalsis (19%), filling defect (19%), obstruction (19%), esophageal narrowing (19%) and gastroesophageal reflux (5%). Two patients (9.5%) had normal studies.

In the case of gastric metastases Jaffe[5] described two main types of radiographic abnormality on UGI series. The commonest type was a "linitis plastica" appearance produced by diffuse intramural infiltration of the stomach with narrowing of the lumen due to thickening of the gastric wall, rigidity and diminished or absent peristalsis in the involved area. These infiltrative lesions could be limited to one region of the stomach or involve the entire stomach. In either case the mucosa was usually intact, especially in early stages. Less often a serrated or nodular contour was seen. Ulcerative lesions were occasionally seen. Gastric outlet obstruction was an infrequent finding but occurred when an infiltrative lesion involved the prepyloric region.

The second type of radiographic abnormality described by Jaffe was a circumscribed nodular lesion demonstrable as a discrete intraluminal filling defect with or without associated ulceration.

Esophagogastroduodenoscopy (EGD) was performed on six patients. Two had normal studies. Esophageal narrowing was found in two patients, esophagitis in one patient, gastritis in one patient, pyloric narrowing in one patient and gastric ulcer in one patient. Endoscopic biopsy was performed on three patients. Biopsy of a gastric ulcer demonstrated tumor in one patient. Gastritis was found in one patient and the biopsy was non-diagnostic in the third patient.

Twenty-two patients within the literature underwent laparotomy. At surgery metastases were found in the stomach in 10 patients (45%), large intestine in five patients (23%) and small intestine in four patients (18%). Two patients (9%) had esophageal obstruction, two patients (9%) had peritoneal implants, one patient (4.5%) had ascites, one patient (4.5%) had liver metastases and one patient (4.5%) had a perforated gastric ulcer.

Survival from the time of diagnosis of carcinoma of the breast was evaluable in 13 patients and ranged from 16 to 115 months with a mean of 41 months. The interval from the onset of GI symptoms to death was evaluable in 21 patients and ranged from three weeks to 115 months (mean 12 months). The clinical cause of death was given for 11 patients and resulted from gen-

eral carcinomatosis in five patients (45%), gastrointestinal bleeding in four patients (36%), post-operative complications in one patient (9%) and myocardial infarction in one patient (9%).

Graham and Goldman[4] reported that survival from the initial diagnosis of carcinoma of the breast was not different for the subset of patients with GI metastases than for those without GI metastases.

There were insufficient data within the literature to evaluate response of GI metastases to therapy although the three cases presented in this report demonstrate that these metastatic lesions do respond to the usual chemotherapeutic and/or hormonal modalities.

Autopsy information was available on nine patients within the literature. In each case widespread metastases were present. While usually occurring in the setting of widely disseminated disease the current case reports demonstrate that GI metastases may be the earliest signs of metastasis.

Pathologic evaluation demonstrated three types of abnormality within the stomach.[3,5-7] First, the stomach may be grossly normal with microscopic foci of tumor cells in mucosa, submucosa or muscularis. Second, there may be single or multiple discrete intramural nodular lesions with or without ulceration. Third, there may be infiltrative lesions that may be localized or diffuse in extent. Such infiltrations frequently involve the entire stomach resulting in a thickened gastric wall. While all layers may be involved there is a propensity to involvement of the submucosa and muscularis.

Distinguishing metastatic carcinoma of the breast from a primary gastric carcinoma may pose a difficult problem. This is a vital distinction to be made since the therapies and responses in these two situations are markedly different. Criteria for making this distinction are offered and generally agreed upon within the literature.[1,5,7] An absence of transition between the gastric epithelium and the carcinomatous infiltrate is considered an indication of metastatic carcinoma. Histologic similarity of the gastric lesion and the primary breast lesion supports the diagnosis of metastatic carcinoma of the breast. The diagnosis of carcinoma of the stomach as a second primary lesion is tenable if transitions are found between the normal gastric mucosa and the malignant infiltrate or if there are any remarkable differences in histologic appearance between the gastric and breast lesions.

The two reports of Hartmann and Sherlock[3,8] require comment. These authors reported a positive correlation between the use of adrenal steroid therapy and gastroduodenal metastases from carcinoma of the breast. Their observations were not substantiated by subsequent reports on the subject.

In summary, GI metastases from carcinoma of the breast probably occur in the clinical setting more frequently than previously recognized. Because symptoms are subtle and non-specific early recognition requires a high index of suspicion. Metastatic disease should be considered when GI symptoms are otherwise unexplainable. For the patient on chemotherapy GI metastases should be suspected in the setting of recent onset of GI symptoms that were not present early in the course of treatment or when the symptoms occur between cycles of therapy. When endocrine ablative procedures such as oophorectomy or adrenalectomy are performed the opportunity should be taken for intra-abdominal exploration. Finally, intra-abdominal metastases from carcinoma of the breast are responsive to therapy.

References **1.** Choi SH, Sheehan FR, Pickren JW: Metastatic involvement of the stomach by breast cancer. *Cancer* 1964; 17:791-797. **2.** Davis HL Jr, Murray RK, Korbitz BC: Breast carcinoma metastatic to the stomach. Report of a case in a male and review of an autopsy series. *Am J Dig Dis* 1968; 13:868-873. **3.** Hartmann WH, Sherlock P: Gastroduodenal metastases from carcinoma of the breast. An adrenal steroid-induced phenomenon. *Cancer* 1961; 14:426-431. **4.** Graham WP, Goldman L: Gastrointestinal metastases from carcinoma of the breast. *Ann Surg* 1964; 159:477-480. **5.** Jaffe N: Metastatic involvement of the stomach secondary to breast carcinoma. *Am J Roentgenol* 1975; 123:512-521. **6.** Conklin EF: Some unusual complications of metastic carcinoma of the breast. *Ann Surg* 1964; 159:489-495. **7.** Yoshida Y: Metastases and primary neoplasms of the stomach in patients with breast cancer. *Am J Surg* 1973; 125:738-743. **8.** Sherlock P, Hartmann WH: Adrenal steroids and the pattern of metastases of breast cancer. *JAMA* 1962; 181:313-317. **9.** Appel MF: Gastric metastases from breast carcinoma. *Ann Surg* 1974; 40:253-255. **10.** Asch MJ, Wiedel PD, Habif DV: Gastrointestinal metastases from carcinoma of the breast. *Arch Surg* 1968; 96:840-843. **11.** Hattori T, Mine H, Abe Y, Yamagata J, Kaibara N, Inokuchi K, Kinjo M, Tanaka K: Metastatic involvement of the stomach from breast cancer. *JPN J Surg* 1973; 3:98-105. **12.** Otto K, Zimmerman U: Diagnostic problems with gastrointestinal metastases in breast cancer. *Endoscopy* 1978; 10:125-127. **13.** Smith TR, Bennett B (eds): Gastric rigidity and breast masses. *NY State J Med* 1977, 77:1120-1122. **14.**— Case No. 381. *Mt. Sinai J Med NY* 1974; 41:603-604.

Barbiturate-Augmented Neurointensive Care of Intracranial Hypertension in Meningitis

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Despite advances in antibiotic therapy bacterial meningitis results in significant morbidity and mortality in children. Increased intracranial pressure is a major factor contributing to these complications. This report describes the use of pentobarbital therapy in conjunction with other techniques of neurointensive care in the management of severe intracranial hypertension in a patient with pneumococcal meningitis.

ACUTE brain swelling accompanied by increased intracranial pressure (ICP) is a major factor contributing to the morbidity and mortality associated with bacterial meningitis.[1,2,3] Barbiturate-induced coma has been reported to be an effective adjunct in the management of intracranial hypertension associated with head trauma,[4] Reye's Syndrome[5] and hypoxic-ischemic brain injury.[6] The following report describes the management of an adolescent patient who developed severe intracranial hypertension as a result of pneumococcal meningitis.

Case Report

A 16-year-old white male had been in good health until one day prior to admission when he developed headache, fever and vomiting. The following morning he was awakened by a severe headache. Upon arrival in the emergency department he was disorientated and combative. His vital signs were: temperature 39.9°C; pulse rate 114 beats/min; blood pressure 146/56 mm Hg; respiratory rate 48 breaths/min. Other pertinent findings included nuchal rigidity, increased extensor muscle tone, symmetric oculocephalic reflexes, and fundal venous congestion. Although meningitis was suspected, lumbar puncture was deferred pending the results of an emergency CT scan of the head. The CT scan revealed "slit-like" ventricles and cerebral edema. An infusion of mannitol, 1 gm/kg, was begun and the patient transferred to the Pediatric ICU.

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While being admitted to PICU the patient began to have decerebrate posturing in response to stimulation. Elective nasotracheal intubation was performed after premedication with diazepam, atropine, and succinylcholine. Paralysis was maintained by administration of pancuronium hydrochloride, and the patient was hyperventilated to maintain a $PaCO_2$ of 20-25 mm Hg. The head of the bed was elevated 30 degrees.

An epidural ICP monitor (Ladd Intracranial Pressure Monitor) was inserted, revealing an ICP of 78 mm Hg. Mannitol, 0.25 gm/kg, was administered by rapid intravenous (I.V.) infusion. Pentobarbital therapy was initiated with a loading dose of 3 mg/kg I.V., followed by hourly doses of 1 mg/kg I.V. The ICP rapidly decreased to 53 Hg while the systemic blood pressure remained approximately 180/110 mm Hg. Intravenous fluids were restricted to 1000 ml/m²/day, and a hypothermia blanket was used to lower the patient's temperature. Arterial and central venous catheters were inserted.

After obtaining a blood culture, intravenous antibiotic therapy consisting of aqueous penicillin G, 24 million units/day and chloramphenicol, 4 gm/day, was begun. Dexamethasone, 1 mg/kg/day, was ordered. The cerebral perfusion pressure (CPP) remained greater than 60 mm Hg as the ICP continued to decrease. By the sixth hour of hospitalization the ICP was 21 mm Hg, BP 110/80 mm Hg, and temperature 38.3°C.

A lumbar puncture was subsequently performed, revealing an opening pressure greater than 32 cm H_2O. The cerebrospinal fluid (CSF) was cloudy and yellow. Analysis demonstrated 6,450 WBC's/ml with a differential of 99% PMN's and 1% monocytes; glucose 26 mg/dl;

protein 1,008 mg/dl; lactic acid 35 mg/dl (normal 10-20 mg/dl). Cerebrospinal fluid CIE was positive for *Streptococcus pneumoniae*. The CSF culture was negative, but the blood culture obtained on admission grew *Streptococcus pneumoniae,* which was sensitive to penicillin. Chloramphenical was discontinued.

During the first three days of hospitalization the ICP remained labile. Pressures greater than 20 mm Hg were treated with mannitol, ¼-½ gm/kg. Signs of depressed cardiovascular function developed on the third hospital day, and a triple-lumen thermodilution catheter was inserted into the pulmonary artery. Hemodynamic measurement revealed a cardiac index of 1.6 L/min·M^2 (normal 3 — 3.5), stroke index of 30 ml/M^2 (normal 36 — 48), systemic vascular resistance index of 3,525 dyne·sec/cm^5·M^2 (normal 1400 — 3000), and central venous pressure of 13 mm Hg. An infusion of dopamine at a rate of 5 mcg/kg/min was begun and hemodynamic measurement repeated after one hour. The cardiac index increased to 3.4 L/min·M^2, and the stroke index to 66 ml/M^2; the systemic vascular resistance index decreased to 2,197 dyne·sec/cm^5·M^2 and the CVP to 8 mm Hg. The serum pentobarbital level at this time was 50 mcg/ml. The pentobarbital dose was decreased to 0.5 mg/kg/hr. Pentobarbital was discontinued the following day when the serum level was found to be 69 mcg/ml.

During the next few days the patient's cardiopulmonary as well as neurological status steadily improved. By the 10th hospital day the patient was obeying simple commands. He was extubated on the 12th hospital day and transferred to the floor the following day. At the time of discharge on the 25th day, he had left-sided cranial nerve palsies involving cranial nerves XI and XII and a moderate left-sided sensorineural hearing deficit. One year after discharge the only detectable neurologic deficit was a persistent left-sided hearing loss.

Discussion

Despite advances in antiobiotic therapy during the last three decades, bacterial meningitis continues to be a significant cause of childhood morbidity and mortality. Meningitis due to *Streptococcus pneumoniae* is the most frequent cause of bacterial meningitis in patients of all ages[7] and ranks third in frequency in infants and children.[8] The mortality rate associated with pneumococcal meningitis for all age groups has ranged from 13% to as high as 51% in recent reports.[9,10,11] Laxer and Marks[12] reported a decrease in childhood mortality from 19% to 3% over a 25-year-period. However, 56% of all patients in this series had significant neurologic sequelae.

The clinical presentation of this patient typifies the fulminant deterioration in neurologic condition which often accompanies pneumococcal meningitis. The objectives of the neurointensive care of this patient were reduction of elevated ICP, maintenance of optimum cerebral perfusion, provision of adequate oxygen and glucose for cerebral metabolism, and reduction of the cerebral metabolic rate.[13,14]

Nugent, *et al,*[2] described the benefit of ICP monitoring in patients who developed intracranial hypertension in association with acute bacterial meningitis. Although frequent physical assessment of the patient remains essential, ICP monitoring enables detection of ICP elevations prior to deterioration of the patient's condition. Intracranial pressure should generally be maintained at less than 20 cm water pressure.[4,15] Monitoring can be safely performed by insertion of an epidural monitor, subarachnoid screw, or intraventricular drain.[16] The relative merits of each technique have been reviewed elsewhere.[17]

Intracranial pressure can be reduced by decreasing the volume of intracranial fluids, *viz,* cerebral edema, cerebrospinal fluid, and intracerebral blood.[14] Elevation of the head of the bed to 30 degrees while maintaining the head and neck in an upright, neutral position facilitates venous drainage from the head. Hyperventilation to achieve a PCO_2 of 25 mm Hg while maintaining normal oxygenation produces cerebral arteriolar vasoconstriction, thereby, rapidly decreasing intracerebral arterial volume and hence, ICP.[17]

Cerebral dehydration by the restriction of IV fluid replacement and the administration of osmotic diuretic agents is the "sine qua non" of the mangement of cerebral edema. Such therapy

should produce a state of mild hyperosmolar, normovolemic dehydration with a serum osmolality of approximately 300 mOsm/L.[14,17,18]

Cerebral blood flow is normally regulated by local autoregulation of cerebral arteriolar resistance. Autoregulation may be impaired by hypercapnia, hypoxia, marked hypotension or hypertension, seizures, traumatic or anoxic brain injury and intracranial hypertension.[14] In areas of the brain in which autoregulation is impaired, perfusion is determined by the cerebral perfusion pressure. Cerebral perfusion pressure (CPP) is equal to the difference between the mean arterial pressure and the ICP. To assure adequate cerebral perfusion, the CPP should be maintained at 50-60 mm Hg.[4,14,19] Adequate CPP for neonates and infants appears to be less, however, minimum values have not been determined.[19]

Early efforts should be made to diminish or avoid any increase in cerebral metabolism due to hyperthermia, seizures or hyper-rigidity.[6] Substrate and oxygen must be provided to support cerebral metabolism. Dextrose infusion should be adjusted to maintain a serum glucose concentration of 130-150 mg/dl to reduce hypoglycorrhachia.[20] The PaO_2 should be maintained at 130-150 mm Hg to facilitate diffusion of oxygen through edematous tissue.[6,13]

Barbituate therapy facilitates control of elevated ICP and appears to provide a "protective effect" to brain cells.[4,5,6] Spence[3] described the use of phenobartitone (phenobarbital) in conjunction with hyperventilation, mannitol, steroids, and hypothermia in a series of 67 children and adults who had severe intracranial infections. Phenobarbitone was administered in dosages sufficient to achieve serum levels that were two to three times the therapeutic range. The relative benefits of the various treatment modalities utilized were not determined. The overall mortality rate was 19.4%.

Pentobarbital therapy was initiated in this patient because initial efforts to reduce the ICP were ineffective. Pentobarbital in doses sufficient to maintain serum levels of 25-40 mcg/dl have been recommended for the management of refractory intracranial hypertension associated with head trauma[4] and Reye's Syndrome.[5] In this patient the ICP appeared to decrease in response to pentobarbital administration; furthermore, subsequent elevations of ICP were controlled with low doses of mannitol (¼-½ gm/kg).[17]

Hypotension due to vasodilatation has been reported to be a frequent complication of pentobarbital therapy, especially when combined with hypothermia.[21] The hypotension and decreased cardiac output observed in this patient were the result of a transient reduction in myocardial contractility. The etiology of this transient myocardial depression was uncertain. Although barbiturate toxicity may cause decreased myocardial contractility, vasodilatation is the major factor responsible for cardiovascular failure associated with barbiturate toxicity. In any case, when pentobarbital therapy is utilized careful cardiovascular monitoring appears prudent in order to detect and appropriately treat hypotension if it occurs.

Conclusion

Despite advances in antimicrobial therapy, bacterial meningitis remains a significant cause of childhood morbidity and mortality. Further reduction in morbidity and mortality requires the aggressive application of advanced techniques of neurointensive care. ICP monitoring is indicated for patients who have signs of persistent intracranial hypertension. Management regimens must be directed toward reducing elevated ICP, maintaining cerebral perfusion, supporting cerebral metabolism and preventing further injury to cerebral tissue. In addition, barbiturate therapy may have a salutory effect and should receive further evaluation.

Editors Note

If meningitis is suspected, a LP should be done before CT scan. Early antibiotic treatment is crucial and should not be delayed.

References **1.** Smith DH, Ingram MB, Smith AL. Bacterial meningitis. *Pediatrics* 52:586-600, 1973. **2.** Nugent SK, Bausher JA, Moxon ER. Raised intracranial pressure. Its management in *Neisseria meningitidis* meningoencephalitis. *Am J Dis Child* 133:260-262, 1979. **3.** Spence M. Severe intracranial infections. *Int Anes Clinics* 17:285-305, 1979. **4.** Bruce DA, Gennarelli RA, Langfitt TW. Resuscitation from coma due to head injury. *Critical Care Med* 6:254-268, 1978.

5. Marshall LF, Shapiro HM, Rauscher A, et al. Pentobarbital therapy for intracranial hypertension in metabolic coma—Reye's syndrome. *Critical Care Med.* 6:1-5, 1978. **6.** Conn AW, Edmonds JF, Barker GA. Cerebral resuscitation in near-drowning. *Ped Clinics of N Am* 26:691-701, 1979. **7.** Swartz MN, Dodge PR. Bacterial meningitis—a review of selected aspects. *New Engl J Med* 272:725-731, 779-787, 842-848, 892-902, 954-960, 1003-1010, 1965. **8.** Weil ML. Infections of the nervous system. Menkes, JH (ed); Textbook of Child Neurology, Philadelphia, Lea and Febiger, 1980, pp 276-290. **9.** Public Health Laboratory Service Report. *Brit Med J* I:623, 1973. **10.** Top FH, Wehile PF, Communicable and Infectious Disease, St. Louis, CV Mosby Co. 1972, p408. **11.** Baird DR, Whittle HC, Greenwood, BM. Mortality from pneumococcal meningitis. *Lancet* II:1344-1346, 1976. **12.** Laxer RM, Marks MI. Pneumococcal meningitis in children. *Am J Dis Chil* 131:850-853, 1977. **13.** Trubuhovich RV. Acute brain swelling. *Int Anes Clinics* 17:77-131, 1979. **14.** Miller JD, Sullivan HG. Severe intracranial hypertension. *Int Anes Clinics* 17:19-75, 1979. **15.** Hahn JF. Cerebral edema and neurointensive care. *Ped Clin N Am* 27:587-592, 1980. **16.** Mickell JJ, Reigel DH, Cook DR, et al. Intracranial pressure: monitoring and normalization therapy in children. *Pediatrics* 59:606-613, 1977. **17.** Zierski J: Extradural, ventricular and subdural pressure recording. Comparative clinical study. Shulman K, Marmarou A, Miller JD, Becker DP, Hochwald GM, Brock M (eds): Intracranial Pressure IV. New York, Springer-Verlag, 1980, pp 371-376. **18.** Marshall LF, Smith RW, Rauscher LA, et al. Mannitol dose requirements in brain-injured patients. *J Neurosurg* 48:169-172, 1978. **19.** Rogers MC, Nugent SK, Traystman RJ. Control of cerebral circulation in the neonate and infant. *Critical Care Med* 8:570-574, 1980. **20.** Menkes JH. Improving the long-term outlook in bacterial meningitis. *Lancet II*:559-560, 1979. **21.** Swedlow D, Raphaely R, Kettrick R, et al. Cardiovascular performance with hypothermia and deep pentobarbital coma in children. *Critical Care Med* 8:236, 1980.

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PROCARDIA® CAPSULES For Oral Use
(nifedipine)

BRIEF SUMMARY

INDICATIONS AND USAGE: I. Vasospastic Angina: PROCARDIA (nifedipine) is indicated for the management of vasospastic angina confirmed by any of the following criteria: 1) classical pattern of angina at rest accompanied by ST segment elevation, 2) angina or coronary artery spasm provoked by ergonovine, or 3) angiographically demonstrated coronary artery spasm. In those patients who have had angiography, the presence of significant fixed obstructive disease is not incompatible with the diagnosis of vasospastic angina, provided that the above criteria are satisfied. PROCARDIA may also be used where the clinical presentation suggests a possible vasospastic component but where vasospasm has not been confirmed, e.g., where pain has a variable threshold on exertion or in unstable angina where electrocardiographic findings are compatible with intermittent vasospasm, or when angina is refractory to nitrates and/or adequate doses of beta blockers.

II. Chronic Stable Angina (Classical Effort-Associated Angina): PROCARDIA is indicated for the management of chronic stable angina (effort-associated angina) without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or organic nitrates or who cannot tolerate these agents.

In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.

Controlled studies in small numbers of patients suggest concomitant use of PROCARDIA and beta-blocking agents may be beneficial in patients with chronic stable angina, but available information is not sufficient to predict with confidence the effects of concurrent treatment, especially in patients with compromised left ventricular function or cardiac conduction abnormalities. When introducing such concomitant therapy, care must be taken to monitor blood pressure closely since severe hypotension can occur from the combined effects of the drugs. (See Warnings.)

CONTRAINDICATIONS: Known hypersensitivity reaction to PROCARDIA.

WARNINGS: Excessive Hypotension: Although in most patients, the hypotensive effect of PROCARDIA is modest and well tolerated, occasional patients have had excessive and poorly tolerated hypotension. These responses have usually occurred during initial titration or at the time of subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta blockers.

Severe hypotension and/or increased fluid volume requirements have been reported in patients receiving PROCARDIA together with a beta blocking agent who underwent coronary artery bypass surgery using high dose fentanyl anesthesia. The interaction with high dose fentanyl appears to be due to the combination of PROCARDIA and a beta blocker, but the possibility that it may occur with PROCARDIA alone, with doses of fentanyl, in other surgical procedures, or with other narcotic analgesics cannot be ruled out. In PROCARDIA treated patients where surgery using high dose fentanyl anesthesia is contemplated, the physician should be aware of these potential problems and, if the patient's condition permits, sufficient time (at least 36 hours) should be allowed for PROCARDIA to be washed out of the body prior to surgery.

Increased Angina: Occasional patients have developed well-documented increased frequency, duration or severity of angina on starting PROCARDIA or at the time of dosage increases. The mechanism of this response is not established but could result from decreased coronary perfusion associated with decreased diastolic pressure with increased heart rate, or from increased demand resulting from increased heart rate alone.

Beta Blocker Withdrawal: Patients recently withdrawn from beta blockers may develop a withdrawal syndrome with increased angina, probably related to increased sensitivity to catecholamines. Initiation of PROCARDIA treatment will not prevent this occurrence and might be expected to exacerbate it by provoking reflex catecholamine release. There have been occasional reports of increased angina in a setting of beta blocker withdrawal and PROCARDIA initiation. It is important to taper beta blockers if possible, rather than stopping them abruptly before beginning PROCARDIA.

Congestive Heart Failure: Rarely, patients usually receiving a beta blocker have developed heart failure after beginning PROCARDIA. Patients with tight aortic stenosis may be at greater risk for such an event.

PRECAUTIONS: General: Hypotension. Because PROCARDIA decreases peripheral vascular resistance, careful monitoring of blood pressure during the initial administration and titration of PROCARDIA is suggested. Close observation is especially recommended for patients already taking medications that are known to lower blood pressure. (See Warnings.)

Peripheral edema. Mild to moderate peripheral edema, typically associated with arterial vasodilation and not due to left ventricular dysfunction, occurs in about one in ten patients treated with PROCARDIA. This edema occurs primarily in the lower extremities and usually responds to diuretic therapy. With patients whose angina is complicated by congestive heart failure, care should be taken to differentiate this peripheral edema from the effects of increasing left ventricular dysfunction.

Drug interactions. Beta-adrenergic blocking agents. (See Indications and Warnings.) Experience in over 1400 patients in a non-comparative clinical trial has shown that concomitant administration of PROCARDIA and beta-blocking agents is usually well tolerated, but there have been occasional literature reports suggesting that the combination may increase the likelihood of congestive heart failure, severe hypotension or exacerbation of angina.

Long-acting nitrates. PROCARDIA may be safely co-administered with nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.

Carcinogenesis, mutagenesis, impairment of fertility. When given to rats prior to mating, nifedipine caused reduced fertility at a dose approximately 30 times the maximum recommended human dose.

Digitalis. Administration of PROCARDIA with digoxin increased digoxin levels in nine of twelve normal volunteers. The average increase was 45%. Another investigator found no increase in digoxin levels in thirteen patients with coronary artery disease. In an uncontrolled study of over two hundred patients with congestive heart failure during which digoxin blood levels were not measured, digitalis toxicity was not observed. Since there have been isolated reports of patients with elevated digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing PROCARDIA to avoid possible over- or under-digitalization.

Pregnancy: Category C. Please see full prescribing information with reference to teratogenicity in rats, embryotoxicity in rats, mice and rabbits, and abnormalities in monkeys.

ADVERSE REACTIONS: The most common adverse events include dizziness or light-headedness, peripheral edema, nausea, weakness, headache and flushing each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%. Syncopal episodes did not recur with reduction in the dose of PROCARDIA or concomitant antianginal medication. Additionally, the following have been reported: muscle cramps, nervousness, dyspnea, nasal and chest congestion, diarrhea, constipation, inflammation, joint stiffness, shakiness, sleep disturbances, blurred vision, difficulties in balance, dermatitis, pruritus, urticaria, fever, sweating, chills, and sexual difficulties. Very rarely, introduction of PROCARDIA therapy was associated with an increase in anginal pain, possibly due to associated hypotension.

In addition, more serious adverse events were observed, not readily distinguishable from the natural history of the disease in these patients. It remains possible, however, that some or many of these events were drug related. Myocardial infarction occurred in about 4% of patients and congestive heart failure or pulmonary edema in about 2%. Ventricular arrhythmias or conduction disturbances each occurred in fewer than 0.5% of patients.

Laboratory Tests. Rare, mild to moderate, transient elevations of enzymes such as alkaline phosphatase, CPK, LDH, SGOT, and SGPT have been noted, and a single incident of significantly elevated transaminases and alkaline phosphatase was seen in a patient with a history of gall bladder disease after about eleven months of nifedipine therapy. The relationship to PROCARDIA therapy is uncertain. These laboratory abnormalities have rarely been associated with clinical symptoms.

HOW SUPPLIED: Each orange, soft gelatin PROCARDIA Capsule contains 10 mg of nifedipine. PROCARDIA Capsules are supplied in bottles of 100 capsules (NDC 0069-2600-66), 300 capsules (NDC 0069-2600-72), and unit dose (10x10) capsules (NDC 0069-2600-41).

The capsules should be protected from light and moisture and stored at controlled room temperature 59° to 77°F (15° to 25°C) in the manufacturer's original container.

More detailed professional information available on request

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"I can do things that I couldn't do for 3 yrs. including joining the human race again."



Quotes from an unsolicited letter received by Pfizer from an angina patient. While this patient's experience is representative of many unsolicited comments received, not all patients will respond to Procardia nor will they all respond to the same degree.

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"My daily routine consisted of sitting in my chair trying to stay alive."

"My doctor switched me to PROCARDIA[*] *as soon as it became available. The change in my condition is remarkable."*

"I shop, cook and can plant flowers again."

"I have been able to do volunteer work...and feel needed and useful once again."

PROCARDIA can mean the return to a more normal life for your patients—having fewer anginal attacks, taking fewer nitroglycerin tablets, doing more, and being more productive once again.

Side effects are usually mild (most frequently reported are dizziness or lightheadedness, peripheral edema, nausea, weakness, headache and flushing, each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%).



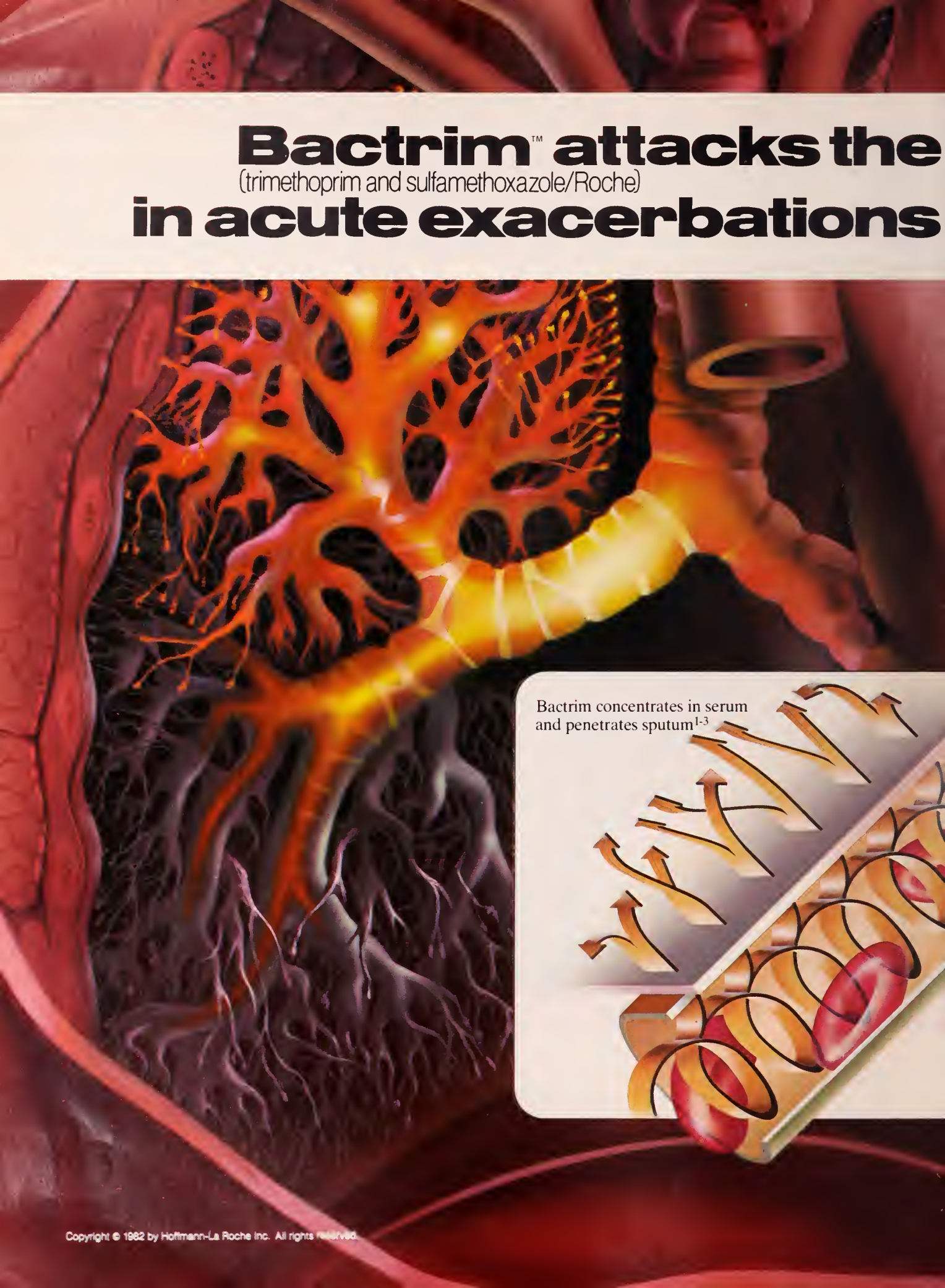
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3) Chronic stable angina without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or nitrates or who cannot tolerate these agents. In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks' duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.

Please see PROCARDIA *brief summary on adjoining page*

Bactrim™ attacks the
(trimethoprim and sulfamethoxazole/Roche)
in acute exacerbations



Bactrim concentrates in serum and penetrates sputum[1-3]

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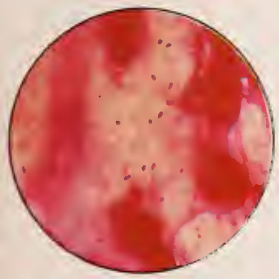
major pathogens of chronic bronchitis*

Bactrim clears sputum of susceptible bacteria

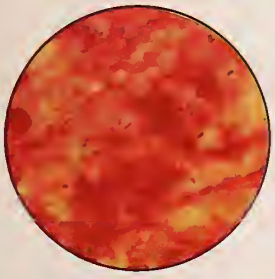
In sputum cultures from patients with acute exacerbations of chronic bronchitis, *H. influenzae* and *S. pneumoniae* are isolated more often than any other pathogens.[4,5] One study of transtracheal aspirates from 76 patients with acute exacerbations found that 80% of the isolates were of these two pathogens.[5]

Bactrim is effective *in vitro* against most strains of both *S. pneumoniae* and *H. influenzae*—even ampicillin-resistant strains. And in acute exacerbations of chronic bronchitis involving these two pathogens, sputum cultures taken seven days after a two-week course of therapy showed that Bactrim eradicated these bacteria in 91% (50 of 55) of the patients treated.[6]

attacks *H. influenzae*—even ampicillin-resistant strains



attacks *S. pneumoniae*



Bactrim reduces coughing and sputum production

In three double-blind comparisons with ampicillin *q.i.d.*, Bactrim DS proved equally effective on all clinical parameters.[7-9] Bactrim reduced the frequency and severity of coughing, reduced the amount of sputum produced and cleared the sputum of purulence.

Bactrim has the added advantages of *b.i.d.* dosage convenience and a lower incidence of diarrhea than with ampicillin, and it is useful in patients allergic to penicillins.

Bactrim also proved more effective than tetracyclines in 10 clinical trials involving nearly 700 patients.[10] Overall clinical condition of the patients, changes in sputum purulence, reduction in sputum volume and microbiological clearance of pathogens—all improved more with Bactrim therapy than with tetracyclines. G.I. side effects occurred in only 7% of patients treated with Bactrim compared with 12% of tetracycline-treated patients. (See Adverse Reactions in summary of product information on next page.)

Bactrim is contraindicated in pregnancy at term and nursing mothers, infants under two months of age, documented megaloblastic anemia due to folate deficiency and hypersensitivity.

Bactrim DS. For acute exacerbations of chronic bronchitis in adults* when it offers an advantage over single-agent antibacterials.

References: 1. Hughes DTD, Bye A, Hodder P: *Adv Antimicrob Antineoplastic Chemother 1*/2:1105-1106, 1971. **2.** Jordan GW *et al: Can Med Assoc J 112*:91S-95S, Jun 14, 1975. **3.** Beck H, Pechere JC: *Prog Antimicrob Anticancer Chemother 1*:663-667, 1969. **4.** Quintiliani R: Microbiological and therapeutic considerations in exacerbations of chronic bronchitis, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts;* Princeton Junction, NJ, Communications Media for Education, Inc., 1980, pp. 9-12. **5.** Schreiner A *et al: Infection* 6(2):54-56, 1978. **6.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **7.** Chodosh S: Treatment of acute exacerbations of chronic bronchitis: results of a double-blind crossover clinical trial, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts. Op. cit.*, pp. 15-16. **8.** Chervinsky P: Double-blind clinical comparisons between trimethoprim-sulfamethoxazole (Bactrim™) and ampicillin in the treatment of bronchitic exacerbations. *Ibid.*, pp. 17-18. **9.** Dulfano MJ: Trimethoprim-sulfamethoxazole vs. ampicillin in the treatment of exacerbations of chronic bronchitis. *Ibid.*, pp. 19-20. **10.** Medici TC: Trimethoprim-sulfamethoxazole (Bactrim™) in treating acute exacerbations of chronic bronchitis: summary of European clinical experience. *Ibid.*, pp. 13-14.

Economical b.i.d.

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole/Roche)

*Due to susceptible organisms. **Please see next page for summary of product information.**

Bactrim™

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please conault complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infectiona be treated with a single effective antibacterial agent rather than the combination. *Note* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections

For acute otitis media in children due to susceptible atraina of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in phyaician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two yeara of age. Bactrim is not indicated for prophylactic or prolonged adminiatration in otitis media at any sge.

For acute exacerbationa of chronic bronchitis in adults due to ausceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offera an advantage over a aingle antimicrobial agent.

For enteritis due to auaceptible straina of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy ia indicated.

Alao for the treatment of documented *Pneumocystis carinii* pneumonitis.

Contraindicationa: Hypersensitivity to trimethoprim or sulfonamides, patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term, nursing motners because sulfonamides are excreted in human milk and may cause kernicterus, infants less than 2 months of age

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders Frequent CBC's are recommended, therapy should be discontinued if a significantly reduced count of any formed blood element is noted

Precautions: *General* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function Bactrim may prolong prothrombin time in those receiving warfarin, reassess coagulation time when administering Bactrim to these patients

Pregnancy Teratogenic Effects Pregnancy Category C Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia *Allergic reactions* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis *Gastrointestinal reactions* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea pseudomembranous colitis and pancreatitis *CNS reactions* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness *Miscellaneous reactions* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L E phenomenon Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients, cross-sensitivity with these agents may exist In rats, long-term therapy with sulfonamides has produced thyroid malignancies

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN

Adults Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp (20 ml) b i d for 10-14 days Use identical daily dosage for 5 days for shigellosis

Children Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis

For patients with renal impairment Use recommended dosage regimen when creatinine clearance is above 30 ml/min If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen Bactrim is not recommended if creatinine clearance is below 15 ml/min

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS

Usual adult dosage 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp (20 ml) b i d for 14 days

PNEUMOCYSTIS CARINII PNEUMONITIS

Recommended dosage 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table

Supplied: *Double Strength (DS) tablets*, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole bottles of 100, Tel-E-Dose* packages of 100; Prescription Paks of 20 and 28 *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500, Tel-E-Dose* packages of 100, Prescription Paks of 40 *Pediatric Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml), cherry flavored—bottles of 100 ml and 16 oz (1 pint) *Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml), fruit-licorice flavored—bottles of 16 oz (1 pint)

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Biliary Tract Infections

M. D. RAM, M.D., Ph.D.

Biliary tract infections are serious and clinically significant problems. Factors which predispose to infections are old age, diabetes, jaundice, stones, previous surgery and emergency surgery. Most frequent organisms isolated are *E. Coli* and other colonic flora. Whether it is cholecystitis or cholangitis, the major factor predisposing to infection is ductal obstruction. *In vitro* sensitivity testing shows that aminoglycosides are effective against all isolates and cephalosporins against 80% of isolates. The latter are excreted in high levels in bile. Specific antibiotic treatment and surgical treatment are mainstays of treatment along with supportive measures such as parenteral fluids, nasogastric suction and nutrition. The risk of local and systemic spread should be recognized and prevented.

The biliary tract, unlike the colon or the respiratory tract, is normally sterile. Obstruction to the flow of bile predisposes to infections. The significance of those infections arises from the fact that these not only produce effects locally, but can also lead to systemic infection and septic complications. Additionally, operations on the infected biliary system may result in infections of the wound.

Pathogenesis of biliary tract infections: The primary pathology in most biliary disorders is obstruction—usually stones, and less frequently due to cancer, strictures, trauma and rarely even due to parasites. Infection is secondary to the obstruction. There is evidence that infection is more often associated with partial or intermittent obstruction than complete obstruction.[1] Presence of bacteria—bactibilia—is not always associated with overt biliary infections. Even histologically, it is not always easy to distinguish pathology associated with infection, from that without infection, unless there is abscess formation.

Routes of invasion: Bacteria may reach the biliary tract from the blood stream, lymphatics, bile duct or direct invasion. Hematogenous invasion may be through the portal venous blood as in pyelephlebitis or as part of a systemic septicemia. In the hepatic paranchyma the bacteria spread from blood into the biliary canaliculi. Lymphatic plexus around the extra hepatic biliary system is so profuse that bacteria could spread from the colon or from a duodenal ulcer. Ductal obstruction leads to stasis and bacterial proliferation. A similar situation is one when there is a loss of sphincteric function, or following biliary enteric anastomosis. Direct spread from neighboring foci of infection is also a strong possibility.

Factors that prevent bacterial invasion include a large daily volume of bile which could mechanically clear bacteria from the system and the intermittent contraction of the gall bladder which could add to the flushing effect. The normal pressure in the common bile duct is 10-30 cm. of water and the sphincter opens at about 16 cm. of water. Bile secretion stops when pressure in common duct reaches 36-38 cm. of water. Bile has inhibitory effect on the growth of common gastro intestinal organisms. Similarly, gastric acid secretion decreases bacterial growth in the stomach and duodenum and thus reduces risk of infection. On the other hand when secretion of acid into stomach decreases, bacterial counts in duodenum increase and a similar effect is seen in bile. Bile has normal levels of immunoglobulins but the neutrophils are immobilized in presence of a high concentration of bile salts.[2]

From the University of Kentucky Medical Center and V.A. Medical Center, Lexington, Kentucky. Based on a presentation made at the Surgical Infections Symposium held at Lexington, Ky., September 20, 1982.

Risk factors: Factors that increase the risk of biliary infections include, increasing age (greater than 70 years), previous biliary tract surgery, recent acute attacks with fever and chills, presence of jaundice, emergency surgery and stones. Gallstones have been described to be tombstones of bacteria, but the bacteria inside the stones are not necessarily dead and some are outside the stones.

Commonly isolated biliary bacteria: The gram negative organisms usually found in the colon are also the ones frequently responsible for biliary infections. *E. Coli* is the most common isolate and is found in either pure or mixed cultures in over half the cases. Other bacteria isolated frequently include streptococcus, enterobacteria, klebsiella, proteus, clostridia, and pseudomonas.[3] More recently *B. fragilis* has also been isolated in a number of these cases. Staphylococci are also frequently isolated in bile cultures but it is not certain whether they are true pathogens or indicate contamination of the specimen. In the past salmonella were also frequently isolated in patients with cholecystitis, particularly in patients who were typhoid carriers, but more recently salmonella infections have been adequately controlled and some of these carrier states have been eradicated by treatment with ampicillin or by operative removal of the gall bladder. Clostridial infections produce a severe variety of acute cholecystitis and are responsible for high mortality and morbidity.

Antibiotics and biliary tract infections: The purpose of antibiotic treatment in biliary infections is to eradicate the bacteria that are responsible for the disease process in the biliary tract and to prevent the risk of infection both systemically and locally. The choice of antibiotic treatment is governed by the nature of the organism, their susceptibility and the degree of penetration of the antibiotic into the bile. Even antibiotics that penetrate poorly into the biliary tract are useful in controlling infections by diffusion into the tissues and into the bile. It also should be noted that most antibiotics penetrate very poorly into the bile when there is complete obstruction to the flow of bile.

Organisms and sensitivity: It is not often possible to obtain information as to the type of infecting organisms prior to operative procedures and culturing of bile. Therefore, it is useful to have some guidelines in regard to treatment based on the frequency of bacterial species isolated from bile. In most studies on biliary bacteria it has been found that coliforms and other gram negative organisms are responsible for biliary infections. The aminoglycosides are effective in vitro against 100% of the isolates. Chloramphenicol and cephalosporins inhibit about 80-95% of the biliary isolates while ampicillin and tetracycline are effective in only about 70% or less of isolates when tested in vitro.[3]

Bile and serum concentration: In reviewing the data on biliary excretion of antibiotics one should remember that data obtained from the animal studies or from studies of the normal human biliary tracts do not necessarily indicate the excretion of the antibiotic in diseased states. High concentrations of antibiotics are noted even in the presence of cholecystitis with cephalosporin, cephalothin, cefazolin, tetracycline, erythromycin and rifampin.[4,5] Similarly, chloramphenicol, carbenicillin, and penicillin also reach high levels in the bile. However, most of the aminoglycosides are poorly excreted into the bile and their levels are low. In patients with obstructive jaundice most antibiotics do not reach high levels in the bile.

Antibiotics of choice: Cephalosporin antibiotics are the drugs of choice for most biliary infections. These antibiotics are relatively non-toxic and reach very high concentrations in blood, bile and tissues. They are effective in vitro against more than 80% of common biliary pathogens. Their bile levels are 10-15 times greater than serum levels.[6] Other alternative drugs are carbenicillin and tetracycline. In severe infections and, in the presence of obstruction, these drugs may not be adequate and one should combine an aminoglycoside with a cephalosporin in the management of these patients. Although the aminoglycosides do not penetrate into the bile in high levels they prevent and combat systemic infections. Once the obstruction is relieved the cephalosporin level in bile reaches high levels and they are effective in further spread of the bacteria.

Acute cholecystitis: Acute cholecystitis is the commonest complication of stones in the gall bladder. Although cholelithiasis is more common in females a greater porportion of patients with acute cholecystitis are men. The majority of patients have pain in the right upper quadrant of the abdomen and are not very sick. In the usual presentation there is often no evidence of systemic infection. These attacks of biliary pain can be treated conservatively. Most patients improve within 48-72 hours following conservative treatment which includes intravenous fluids and nasogastric suction and relief of pain. As noted earlier there are certain factors favoring infections and this group of patients need to be treated with antibiotics. These factors include older age group, systemic disease such as diabetes, jaundice, previous operative procedures and systemic signs of

infection such as fever, profound leukocytosis and progressively worsening local signs indicating perforation, abscess or gangrene.

In the routine patient with acute cholecystitis after initial conservative treatment and confirmation of the diagnosis by either ultrasonography or biliary scanning, a cholecystectomy can be performed safely and a closed suction drain is placed in the gall bladder bed. This is preferable to waiting 6-12 weeks and then admitting the patient for elective cholecystectomy.[7] There is no magic period in regard to timing of cholecystectomy in acute cholecystitis and we have found it safe to perform the procedure once the patient has been stabilized and the diagnosis established. However, if the systemic signs or the local signs indicate that the process is not resolving, an emergency operation should be undertaken. In these situations one often finds a perforation with a localized abscess or impending or frank gangrene. Even in this situation, cholecystectomy can be performed if the anatomic outlines can be defined. In the rare situation when either the local anatomic features are not clear or the patient's condition is poor, one might elect to do a cholecystostomy for drainage of the biliary tract. In our experience this operation has only been used very infrequently. At the operation bile cultures should be obtained and gram stains also should be performed. If the prophylactic antibiotic treatment that has been started is not adequate to control the symptoms by about 48 hours at least the data from the culture would be available and would permit appropriate changes in antibiotic treatment. It should be remembered that prophylactic antibiotics do not sterilize the bile but reduce the incidence of wound infections.[8] A rare variety of severe acute cholecystitis is the one due to gas producing organisms such as *E. Coli, Klebsiella,* or *Clostridia*. This emphysematous cholecystitis is more commonly seen in men and diabetics. Gangrene and perforation tend to occur in the early stage. The morbidity and mortality of this variety is much higher than due to acute cholecystitis in the general population.

Chronic cholecystitis: Patients with chronic cholecystitis usually are admitted for elective cholecystectomy. The incidence of positive cultures in this group of patients is only about 30%. If the patient is otherwise healthy and has no risk factors, prophylactic antibiotics are not necessary. However, if the patient has systemic or local predisposing factors for infection such as old age, diabetes, obesity, chronic pulmonary obstructive disease or such, prophylactic antibiotics are indicated and one of the cephalosporin antibiotics is adequate. Culture of the bile at operation is strongly indicated. Should any postoperative infection develop, the culture information would be very useful in the management of the patient.

Until the mid 1960's the infection rates following elective cholecystectomy ranged from 6-17%. More recent data indicates that elective cholecystectomy is followed by an infection rate of about 2.2%. When appendectomy is added to a cholecystectomy the infection rate is about 4.8%. If a common bile duct exploration is combined with a cholecystectomy, the infection rate raises up to 7.9%. These figures are to be kept in mind when cholecystectomy is combined with other surgical procedures.[2]

Acute Cholangitis: Cholangitis is almost always due to ductal obstruction. The mild variety with infection and systemic symptoms is referred to as ascending cholangitis. When the infection is severe and is associated with pus formation it is referred to as suppurative cholangitis. Partial obstruction of biliary drainage by stone, papillitis, tumor, stricture, pancreatitis or parasites is often the cause. Obstruction due to tumor is of the ball valve type. Complete obstruction of bile flow by tumor is associated with a lower incidence of cholangitis. Cholangitis may also follow biliary enteric anastomoses when the site of anastomosis is narrow. If the anastomosis is done through a Roux-en-y loop and gastro intestinal contents are bypassed from the site of anastomosis, the risk of cholangitis is much less. As noted earlier, the decrease of bile in the duodenum permits bacterial proliferation in duodenum and is a contributing factor for infection.

The clinical features of cholangitis are too well described in most texts. In addition to the well known features of Charcot's triad of pain in right upper quadrant of the abdomen, jaundice and fever with chills, the patient may manifest hypoglycemia and depression of central nervous system function. As the disease progresses, septicemia, delirium, shock and multiple organ failure may all set in. Bacteria can be isolated from bile in 85-90% of patients. Most isolates are aerobic but *B. Fragilis* and *Clostridia sp.* are also common.

Treatment of the condition should be early and aggressive. Nasogastric suction, intravenous fluids and pain relief are important. Antibiotic therapy must be instituted early and in adequate doses. A combination of an aminoglycoside such as gentimicin, with a cephalosporin and clindamycin is very useful. Some of the newer cephalosporins may prove equally useful. Dosage must be adequate and the choice of drugs may have to be changed after culture data are ob-

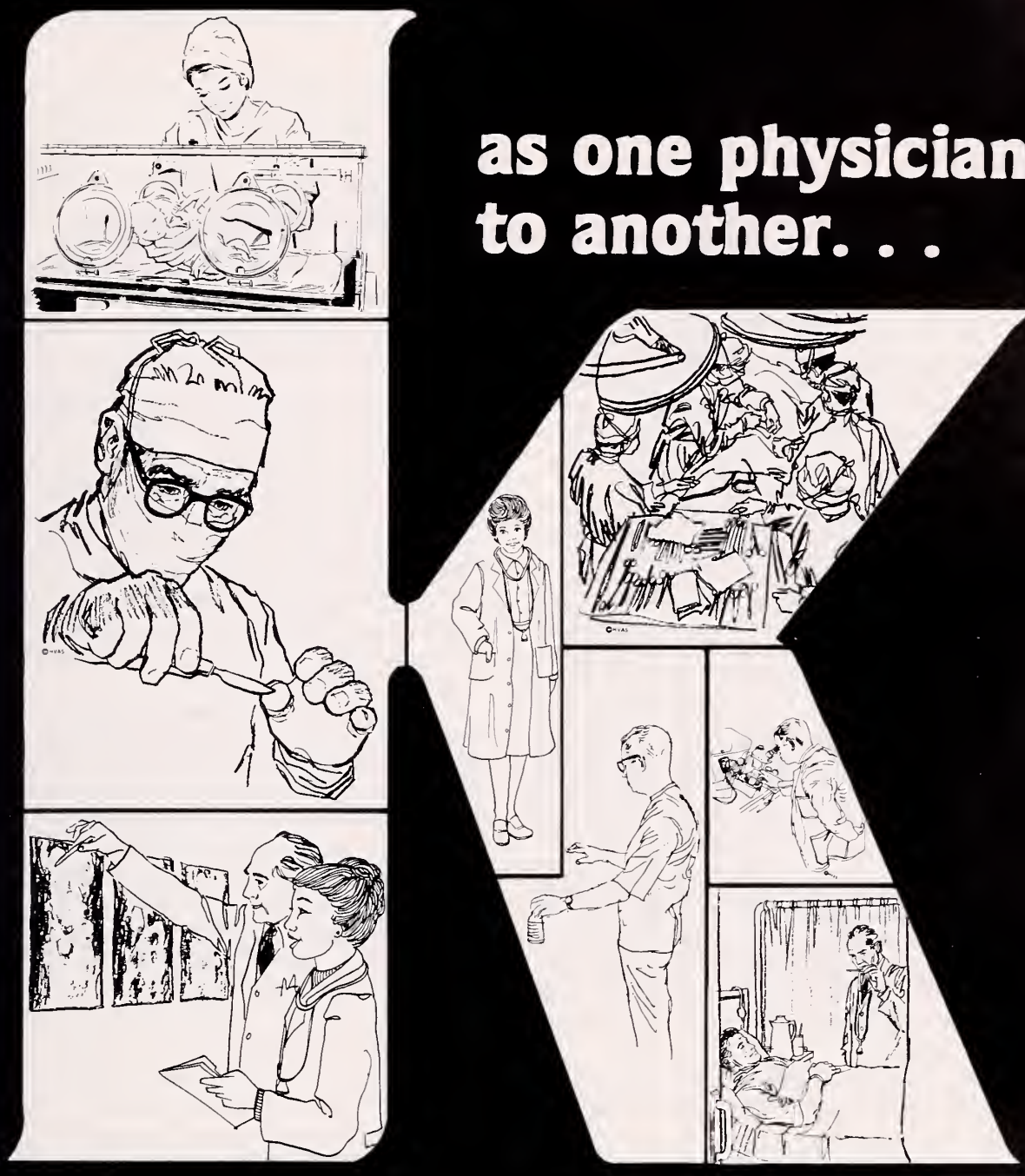
tained. Early decompression of the obstructed bile duct is very important and until this is accomplished, treatment is inadequate. A cholecystectomy alone is not adequate and the common bile duct must be drained with a T-tube. The cause of the obstruction may be removed at the same time or a second operation may be required to accomplish this. Recently, drainage through transhepatic catheters has been tried with some success but if the patient does not improve rapidly, no time should be lost in instituting surgical drainage. The mortality of this condition is still around 15%.

Cholangiohepatitis: This unusual disease is common in young Chinese living in Hong Kong. There is a high association with pigment stones and parasitic disease. The intrahepatic ducts are dilated with stones and sludge. Early and prolonged biliary drainage is needed along with long term antibiotic therapy.

Biliary infections and external drainage tubes: Incidence of biliary infections is high in patients with indwelling transhepatic cholangiography catheters and other external drainage tubes. Prevention of infections in this situation is very important and strict aseptic precautions should be taken during insertion of these catheters. Drainage should be into closed system and exit sites of catheters must be cleaned and covered with antiseptic dressing. Irrigation of catheters under sterile conditions with normal saline containing a cephalosporin antibiotic has been useful and prevents leakage at exit site. The role of prophylactic oral antibiotics on a long term basis is not clear and currently they are not recommended.

Bile Peritonitis: Bile peritonitis may be due to a leak from a perforated, gangrenous gall bladder during an acute cholecystitis or due to a leak from a catheter puncture site of the liver. When the leak is localized, as is often due to a perforated acute cholecystitis, the result is a pericholecystic abscess. When there were no preformed adhesions, a generalized bile peritonitis is the result. The systemic effects are profound because bile is a strong irritant and additionally the bacteria contribute to the infection and abscesses. Treatment consists of removal of cause, surgical drainage of bile leak and adequate antibiotic therapy along with routine measures to combat peritonitis.

REFERENCES 1. Williams R. and Dawson JL: The Management of Ascending Cholangitis. *Proc Roy Soc Med* 62:243-245, 1969. **2.** Nichols RL: Biliary Tract Infections in Surgical Infections Diseases. First Edition. Edited by Simmons, R. L. and Howard, R. J. Appleton-Century-Crofts, New York. 1982. pp. 845-856. **3.** Ram MD and Gharavi, MA: Biliary Infections and Choice of Antibiotics. *Am J Gastroenterol* 62:134-138, 1974. **4.** Ram MD and Watanatittan, S: Cephalothin Levels in Human Bile. *Arch Surg* 108:187-189, 1974. **5.** Ram MD and Watanatittan S: Biliary Excretion and Concentration of Cefazolin. *Am J Gastroenterol* 66:540-545, 1976. **6.** Ram MD: Biliary Infections and their Management. Drug Therapy 1:37-41, 1976. **7.** Ram MD, Bergese J and Brown, HW: Surgical Treatment of Acute Cholecystitis. *Am Surg* 43:763-767, 1977. **8.** Chetlin SH and Elliott DW: Preoperative Antibiotics in Biliary Surgery. *Arch Surg* 107:319-323, 1973.



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SPECIAL ARTICLE

The Dignity of the Patient

HENLEE BARNETTE, Ph.D.

Dignity as it relates to the patient/provider health enterprise is characterized by considerable ambiguity due to its subjective dimension. Searching through a dozen dictionaries, I discovered a multitude of meanings for the term. Among these are worthiness, deserving, self-respect, honor and goodness.

Etymologically, dignity stems from the Latin *dignitas* and basically indicates "intrinsic worth." At least one current dictionary adds: "to stand on one's dignity" and "to insist upon being treated respectfully."[1] The significance of the recognition of human dignity or inherent worth really gets at the fundamental meaning of dignity and its relevance for modern decision-making.

Anthropologies that deny the dignity of individuals tend to perceive them as objects to be mastered and manipulated. Such a perspective of persons makes them vulnerable not only to dictators, but to divines and to doctors.

Recovery of the principle of dignity or the preciousness of personhood should do two things: (1) provide a positive ethical principle that is being lost in our increasingly impersonal culture; and (2) it should result in a better quality of health care for the individual who will be seen as a person and not merely as a patient.

Persons have dignity and worth for a number of reasons. I shall identify and briefly describe only four of these.

The *Imago Dei* and Self-transcendence

In the light of the Judaeo-Christian tradition, the individual is made in the *imago Dei* (Genesis 1:26-27). Hence, everyone is of inherent worth and has a sacramental nature. Therefore, there is a prohibition against destroying a person (Gen. 9:6). To be made in the *imago Dei* also means that the individual has dignity—that is, capacity for fellowship with the Creator—and also dominion, a sharing in shaping the environment under God for the common good.

Paradoxically, we are like God and animals for we are made "a little lower than God and with dominion over the animal kingdom" (Psalm 8). Animals make choices by instinct; we make them in a measure of freedom. We have the capacity for self-transcendence for we can recall the past and reflect on the future, the *nocht nicht zein.*

Hence, the individual is both a human and spiritual being. He/she stands at the juncture of nature and grace and exists in a paradoxicality of finitude and freedom which is our source of existential anxiety. Such a person presupposes another person over to which the person passes and to society. In society, he or she is confronted with dehumanizing and dignity enhancing forces.

Persons made in the image of God with a sense of self-transcendence are of intrinsic worth and are to be treated accordingly. According to Adolf Harnach, the noted German theologian, Jesus was the first to bring to light the value of every human soul.[2] Jesus saw value in every person: great worth in a little child in a day when the child's life was cheap (Mark 10:13-16), a leper who was ostracized from society (Matthew 8:1-4), an adulterous woman whom others sought to destroy, and despised tax collectors and sinners (Luke 15:1-10). He declared that a person is worth more than animals (Matthew 10:31) and that one's life is worth more than the whole world (Mark 8:36).

Implications of the intrinsic value of persons for every medical procedure are obvious. Any modality or treatment that violates our freedom and our sense of worth treats us as objects to be manipulated. And it is dehumanizing for another to personally and paternalistically decide what quality of life is fit for us without our input into the decision-making process.

Persons as Ends

Great philosophers also stress the value and dignity of personhood. Immanuel Kant, for example, insists that everything in creation can be used by man as a means to an end—except an individual. We are, therefore, to "treat humanity, whether in thine own person or in that of any other, in every case as an end withal, never as a means only."[3] Why? Because the individual is a rational creature, an end in himself. He is the subject of moral law and is sacred by virtue of his undivided freedom.[4] A person's freedom and

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not his virtue is the source of his dignity. To deny a person's freedom is to denigrate his or her dignity.

The Thouness of Thee and Me

Martin Buber, the noted Jewish philosophical theologian, reminds us that we exist in two fundamental relationships: I-Thou and I-It. The I-Thou is basically the realm of persons and the I-It is the realm of things. The I-Thou, the primary word of relation and togetherness, is characterized by mutuality, care, and concern. I-It is the primary term for experiencing, using, and is lacking in mutuality. But the Thou can become an It and be treated as such.[5]

Examples of how the I-It can become a relationship between one person and another are numerous. An employer may treat his employees as machines; wives may treat their husbands as things and vice-versa; and a doctor may treat a patient as merely a "case," an object to be manipulated and exploited. To thus "thingify" a person is to dehumanize and denigrate him or her. It is to fall victim of the "Medusa complex" in which persons are reduced to objects or things.

"I am Important to Me"

Finally, I, as an individual, have a sense of value to myself and I want to be treated as a person. Hence, I want to be taken seriously by my physician and other health professionals.

My sense of dignity is important to my own health and welfare. This holds true for everyone. A deeply depressed patient in a psychiatric ward had suffered a number of losses including his wife of several years. One day he handed me a quotation from Noel Coward which clearly indicated that he was getting well. It read:

> My sense of my own importance to myself is tremendous. I am all I have, to work with, to play with, to suffer and to enjoy. It is not the eyes of others that I am wary of, but my own.

My response was: "I am important to me." The patient perceptively observed, "When you are not, you end up here."

A wise health care professional will be aware of this desire on the part of the patient to really matter. Norman Cousins has put it this way:

> The modern physician strides forth into the world from medical school with a certificate of learning in one hand and a vast array of exotic medications and technological devices in the other. But the humans who look to him for help are fragile, perplexed, vulnerable. More than anything else, they want to know that they matter.[6]

These are only a few observations of the significance of a sense of human dignity in moral decision-making. Decisions which dull or destroy this sense are reprehensible. Hence, healthy decisions enhance personal dignity and promote a quality of life that keeps human life human.

References **1.** *Oxford American Dictionary* (New York: Avon Publishers, 1980). **2.** Adolf Harnach, *What Is Christianity?* (New York: Harper and Brothers, 1958), pp. 67-68. **3.** Immanuel Kant, *Fundamental Principles of the Metaphysics of Morals* (New York: Liberal Arts Press, 1949), p. 46. **4.** *Ibid.*, pp. 47-57. **5.** Martin Buber, *I and Thou,* R. G. Smith, trans. (Edinburgh: T. and T. Clark, 1944). **6.** Norman Cousins, *Human Options* (New York: W. W. Norton, 1981), p. 212.

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EDITORIAL

SMA—6

THE upward spiral of health cost in this country is a matter of great concern. In one way or another, we doctors authorize most of these expenditures (hospital admissions, operations, lab tests, x-rays, etc.). Sometimes we make such authorizations without accurate knowledge of their costs. A case in point (and there are many others) is the so called SMA-6. This *S*imultaneous *M*ulti *A*nalysis includes sodium, potassium, chlorides, CO_2, BUN, and glucose. This arbitrary group of data was popularized years ago when it became available at a very low price on the new auto analyzers. Today, it is *very* widely used in many hospitals even though the data obtained may not be altogether pertinent and even though the cost may be surprisingly high. For example, in one Louisville hospital all SMA-6 determinations except those done in the early morning on the auto analyzer (one run per day at $17.75) are done manually in the lab at a charge of $46.25. It is common practice in this hospital for the doctor to order a stat SMA-6 ($46.25) when he may only really be interested in one or two of the six tests. For example, he may order a Stat SMA-6 ($46.25) when he may be interested in only the potassium ($10.75) in a pre op patient who has been on diuretics. He orders the SMA-6 because he thinks it's cheap when, in truth, it's not.

The cost of hospital services should be prominently and widely displayed so as to be easily accessible to those of us ordering these services.

McHenry S. Brewer, M.D.

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THE DOCTOR WHO PIONEERED ABDOMINAL SURGERY

Dr. Ephraim McDowell

In 1795, Dr. Ephraim McDowell of Virginia settled in the village of Danville, Kentucky. His practice took him on horseback over hundreds of miles of wilderness.

Nevertheless, his reputation as a skillful and successful surgeon spread—especially for lithotomies, which he performed 22 times without losing a patient.[1]

First ovariotomy

McDowell's true moment in history came in 1809, when he performed the first known ovariotomy for removal of a tumor from Jane Crawford, then 47. The procedure was completed in 25 minutes, and Mrs. Crawford not only recovered but lived to age 78.[1,2]

This landmark surgery was performed under the most primitive conditions—without anesthesia or antisepsis—while, the story is told, brave Mrs. Crawford distracted herself as best she could by singing hymns.[2]

His published reports of this case, along with two others in 1817 and an additional two in 1819, established Dr. McDowell as the physician who saved women afflicted with ovarian disease from their previously hopeless situation and, further, marked the beginning of abdominal surgery.[1] To European medical practitioners, Dr. McDowell's accomplishments offered clear evidence that medicine was coming of age in America.[3]

References: 1. Gorrison FH. *An Introduction to the History of Medicine*, 4th ed. Philodelphio, W. B. Saunders Compony, 1929, pp 507-508. **2.** Pockord FR. *History of Medicine in the United Stotes*, vol II New York, Hofner Publishing Compony, 1963, pp 727-728. **3.** Shaftel N. The evolution of Americon medicol literoture, in *History of Americon Medicine*, edited by Morti-Ibonez F; New York, MD Publicotions, 1959, p. 106.



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References: 1. Rickels K: Drug treatment of anxiety, in *Psychopharmacology in the Practice of Medicine,* edited by Jarvik ME; New York, Appleton-Century-Crofts, 1977, p. 316. **2.** Feighner JP *et al: Psychopharmacology 61*:217-229, Mar 1979. **3.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ

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Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use, then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated: sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude toxic, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:

Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.

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BOOK REVIEWS

Stand Tall

Morris Notelovitz, MD and Marsha Ware,
Triad Publishing Company, Inc., 208 pages

This is an interesting book. Again we are reminded of the importance of nutrition, not only for the medical person to understand, but also as a much discussed and emotional topic in the community.

From a climacteric study group the impetus for codifying the information about osteoporosis was begun. Research germane to the etiology and physiodynamics of bone loss by attrition is summarized in the beginning chapters. Then the "how to" aspect punctuated by bold headlines and current product recommendations get to the point. Whether you are a carnivorous, vegetarian, or a nonpolar compromise, specific suggestions are offered. Along the way concerns about too much calcium intake, the legacy of commensurate calorie gain, and intercurrent illness are addressed.

There is a diagnostic section, in the model of self breast examination programs, which encourages awareness of clinical signs and regular interaction with one's physician. Probably this aspect of the book, this broadcast of another malady for the public to anticipate, is frequently emphasized. This is not inappropriate since osteoporosis—"the silent disease" affects at least one quarter of women and some men. There is surely an audience for this book's program.

Appended to the book after the concluding chapters of case histories, is a glossary of terms, model "score sheets, a bibliography and index, which consume almost a quarter of the book!

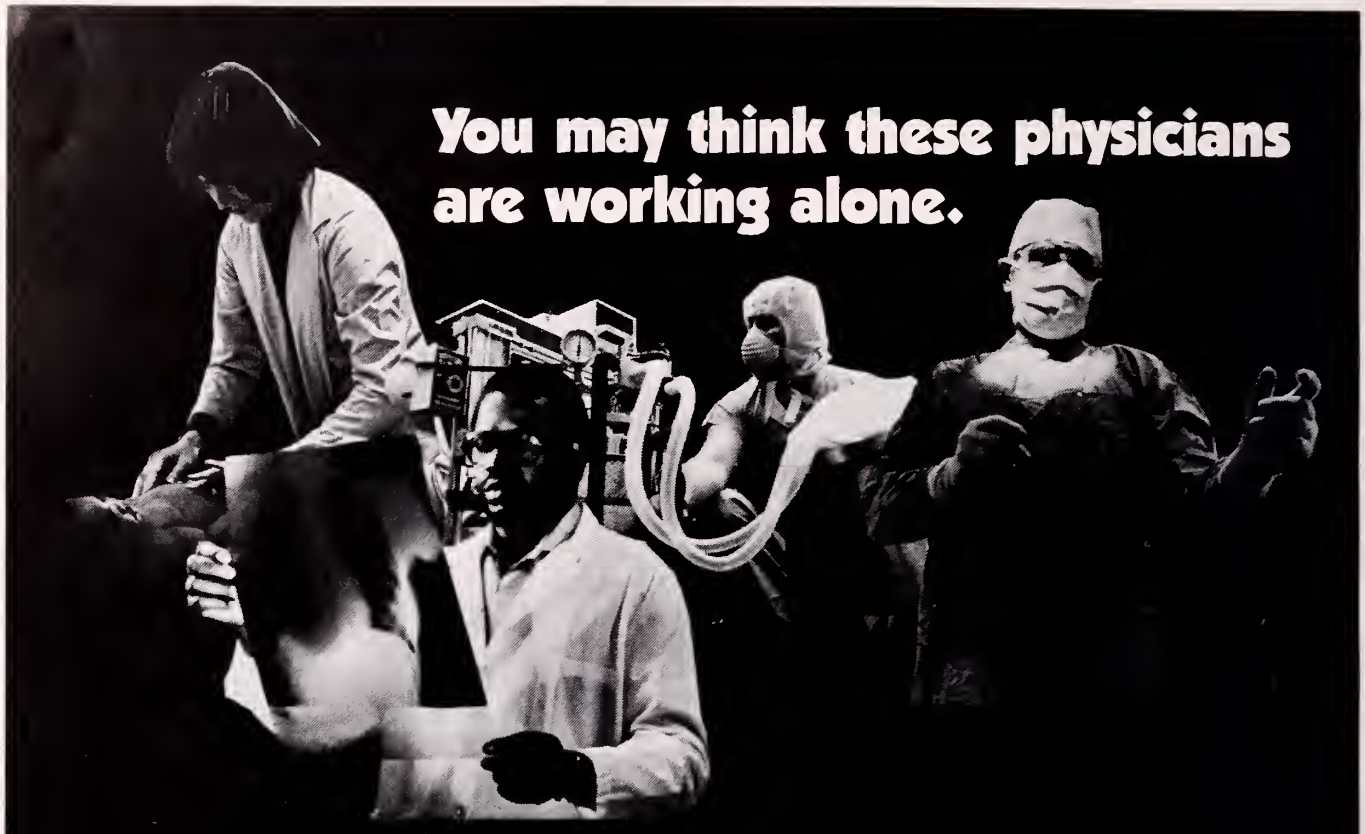
Stand Tall is a concise, readable, dimorphic (paper and hardback) book which will be pertinent to our maturing and inexorably aging population.

Communication Media in the Health Sciences

Individual & Professional Information Services, 359 Pages.

With that logo this book is not to be bedside reading. Rather a sophisticated science and media schooled reader would take this book for consumption. The author is a former anatomist and feels comfortable with the dissection of information processing and ascertainment. His personal illustrations flavor an otherwise bland but ecumenical book. Actually his effort is quite noble. He looks at the poliferation of informational delivery systems, whether visual, verbal, or tactile based, as delectable. He anxiously sections the medical vista with the purpose of organizing a delivery system adequate to present needs and amenable to future demands. Librarians, teachers, reviewers, communication companies, and publishers—all may be aided by using this book.

We soldiers of medicine would not grab this book to battle the keeping up onslaught. A review in our state journal is undertaken as an attempt to be inclusive rather than pedantic.



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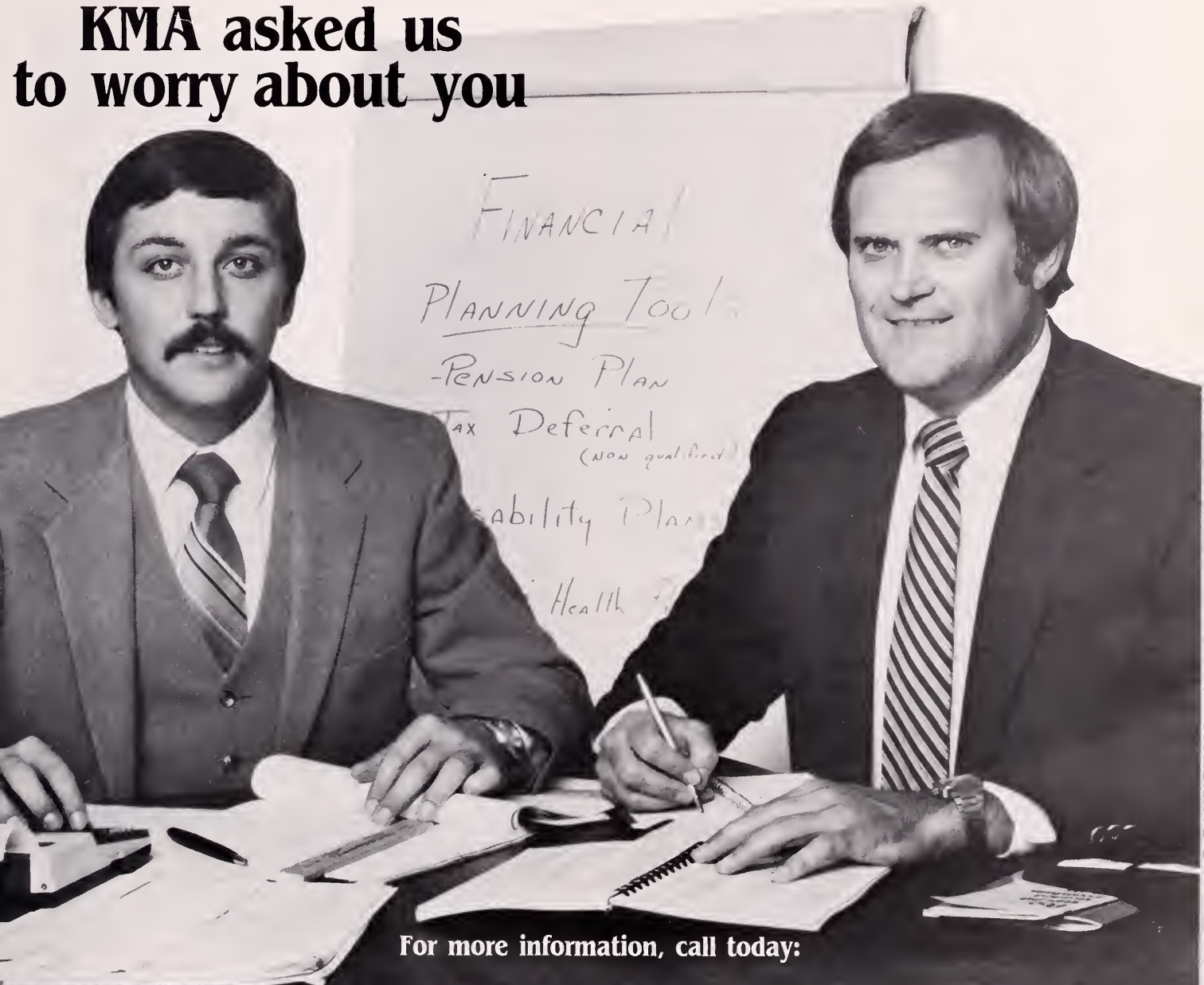
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SPECIAL ARTICLE

Practice Management

The *Journal* is beginning a new section on practice management to assist physicians in their daily office practice. This monthly feature will focus on a particular issue or subject that directly affects the physician's practice of medicine. Although we will select subjects we feel will be of interest to you, your suggestions and requests for certain topics will be appreciated. Direct all inquiries to the *KMA Journal* Office, Attn: Practice Management.

The Association will be offering several workshops this month for practicing physicians and their office staff. Besides the continuing popular "Collections" workshop for medical assistants, the Association has selected a workshop on "Computers in Private Practice" for practicing physicians. Initial response to this workshop is overwhelming. We, therefore, felt it appropriate to begin our Practice Management Section with the theme "Computers in Private Practice" which will consist of a series of articles. This series may give you some insight into the utilization of computers in your practice.

The Association is examining the alternatives available to assist the membership with their office automation. Initially we hope to provide you with as much information as possible to aid you in your review of the possibility of office automation. During the next eight months, we will discuss the following items in detail:

Computers in Private Practice

"The Automated Office/Evaluating the Need"—March
"Introduction to Computers"—April
—covering personal to office models
—definition of terms
"Selection of Hardware"—May
"Selection of Software"—June
"Request for Proposal"—July
"Training Personnel/Implementation"—August
"Legal & Other Miscellaneous Considerations"—September
"Maintaining & Maximum Utilization of Your System"—October

This schedule is subject to change but reflects the detail we plan to pursue in insuring that individual physicians have the information necessary to make a smooth transition to computers.

The Automated Office/Evaluating The Need

The Automated Office, "What is it" and "Will it work for me."

The physician, as any small business person, is faced with the everyday realities of coping with the paper jungle that has been created by government, third party insurers and society's thirst for information. It is our quest for speed and accuracy in accomplishing a task that drives us forward to develop new approaches and methods. The computer gives us the edge to meet these requirements.

The automated office is the office of the future. It is all part of the **Computer Age** which affects everything we do. More technological advances have been made in the past 10 years than have been made over the past 200 and it is impossible to keep current on every major new development. Medicine has been using computers for many years for a variety of duties, but until recently the use of a computer system in private practice has been ignored.

Initial computers were large, expensive, and had minimal computing power. Space-age-technology, which introduced miniaturization, enabled today's "credit card" size calculators to have the same power and capabilities as the original computers at a fraction of the cost. Until recently, the cost for an individual physician or small group practice to enter the computer age was prohibitive. Today a single-operator office system can be purchased for under $12,000 (this includes the video terminal, a letter quality printer and programs to handle accounting and document management). The Home Computer, although capable of small tasks, does not have the power, speed or on-line storage of an office computer. Therefore, when considering a computer for your office, avoid a Home Computer as part of the solution.

Continued on page 186

GLOSSARY

Byte — the smallest addressable unit in a computer.

Computer System — an automated system that is capable of computing large quantities of information and storing information for rapid reference.

Data Base — a nonredundant collection of inter-related data items processable by one or more applications. Nonredundant means that individual data elements appear only once (or at least less frequently than in normal file organizations) in the data base. Inter-related means that the files are constructed with an ordered and planned relationship that allows data elements to be tied together, even though they may not necessarily be in the same physical record. Processable by one or more applications means that data is shared and used by several different subsystems.

Document — a collection of letters, words and/or numbers for the purpose of identifying the information, text, or data.

Draft Printer — high speed, marginal quality printer which uses a series of dots to form the letters or numbers (Dot Matrix Printer)

Hardware — the mechanical or electronic equipment which is combined with software (programs, instructions, etc.) to create a computer system.

Input — the data or text to be processed, or transfer of data or text to be processed via a keyboard.

LQP — letter quality printer—a printer that generates output such that it is suitable for high quality business correspondence.

Memory — the temporary work space used by the computer to arrange the data to be processed.

Multi-User System — more than one operator may access the computer at a given time, multiple terminal access.

Off-Line — not connected to the system, removal from the system.

On-Line — a word or data processing operation which is performed on a local system connected to and sharing the facilities of a remote central processor, connected and communicating between terminal and computer.

Output — the product of an information processing operation, produced via display on a peripheral device such as a printer, communications, or mag tape.

Processor — Central Processing Unit [CPU]—does the actual computations of the data and is capable of only processing one job at a time.

Program — a set of instructions arranged for instructing a computer to perform a desired operation.

Software — a term coined to contrast computer programs with the "iron" or hardware of a computer system. Software is a stored set of instructions which govern the operation of a computer and make the hardware run.

Video Terminal — CRT Cathode Ray Tube terminal—an input/output device that echos the commands and results on a tv-like screen.

Word Processing — a program which enables the storage of text and makes it available for editing, printing or transmission to other computers.

A small group practice should use a multi-user system with a similar configuration as listed above that would cost far less than $20,000. These costs may seem excessive for an office aid, but when amortized over five years (minimum utilization period) the system costs less than $20 per business day, works overtime and holidays, and is tax deductible.

The initial office computers were stand-alone systems that were unable to communicate with other systems, thus restricting their use. In 1982, small computer systems were finally able to communicate with other systems. This opened a large range of opportunities. Access to large data bases of information, rapid transfer of information to be processed for quick turnaround of office processing (eg claims management) and the ability to share information from files with colleagues anywhere in the world is now possible. The computer and phone will merge in the near future to become a commonplace part of a medical office.

Evaluating the Need

To determine the potential benefits of automation, it is important to conduct a thorough review of your current office operation, including employee relationships, productivity and costs. Find out who communicates with whom, using what methods, and how often. A common assumption states that automation leads to better information, which leads to increased productivity, which in turn leads to a more successful operation. If you adequately take advantage of your available employee and automated office resources you will realize these objectives.

First Step: "Know the Needs of Your Practice"

How is your office organized? What is your patient load? Is it managable?

How do you determine your needs? Consider the following:

- maintaining a growing practice
- need for a quicker turnaround of insurance claims
- cash flow stagnant—need to expedite
- daily reports and forms to generate
- office productivity or lack of
- control of office work environment
- need for consolidation of office procedures
- will cost savings be realized

Automated accounting has been proven to be an effective office aid that far exceeds the antiquated manual approach. This operation alone provides rapid inquiry response, invoice and document preparation, and prompt budget review besides keeping a secure control on finances.

Consolidation of information is the key benefit of this operation. One data base enables you to process your accounting, maintain an indexing file on your patient's medical history and eliminate excessive duplicate files.

Do you do a lot of consulting that requires documentation of the visit or a report to the referring physician? If this is the case, a computer equipped with word processing (text and document management) could be extremely beneficial and time saving. One time entry of the document and quick changes of the text are extremely advantageous to the physician who must spend a considerable amount of time with the preparation of a chart or report.

One may argue that a memory typewriter would be less expensive and accomplish the same goal. Although the price of a memory typewriter ($3,500 to $4,500) is lower than a small professional computer, it cannot store pages of text indefinitely, maintain a document larger than two pages, produce a customized mass mailing or index documents for future reference.

The needs of your office should be written down in the order of importance to you. How these needs are now met should also be listed. Are the methods currently utilized satisfactory for your office? It is then important to seek input from your partner and staff.

Second Step: "Consult Your Staff"

The staff of a medical practice is the key to the successful purchase, implementation and operation of a computer system. Their input is essential for any successful operation.

- Request input from the staff through the office manager who will obtain good relevant comments on your office's computer needs or lack of need.
- Identify your key operator(s). Those individuals with the most interest should be encouraged to take on the responsibility of managing and operating the system for your office. Reward these individuals for their efforts and support them with outside training and computer support services from the supplier.
- Educate the staff on your plans and your desire and reasoning for the addition of a computer. Assure the staff that they are not being replaced by a computer but simply being retrained to accomplish the work more quickly and efficiently.

Third Step: "Cost Justification"

The cost of computers has dropped considerably in recent years but a functional office system will still start at approximately $12,000. The one time price tag may shock many individuals, but this investment, as with any other, must be viewed for its long term benefits. You should consider that any purchase of a system should be amortized over a minimum of five years with most companies using seven.

For an initial investment, an individual would receive a single terminal system for approximately $8,000. This includes 10 million bytes on-line storage (2000 pages) and unlimited off-line storage, and a memory and processor to handle the work load expeditiously (calculations performed in micro seconds and billing statements printed out in less than a minute). For output, this system would require a printer that would run $900 for a draft printer to $2,800 for a letter quality printer. The communications option (phone link with other systems) would be less than $1,000. The initial system price includes operating software (instructions for hardware functions). Programs on accounting ($1,000-$5,000), word processing ($500-$1,000) and patient records ($2,000-$5,000), would have to be added. Additional programs are also available to meet individual requirements.

It is not advisable to expect to reduce your staff with the addition of a system. Quicker cash flow turnaround through improved accounting procedures and a general reduction of employee time from past job requirements are expected benefits of a system. However, you will find that increased productivity will produce a higher quality of work but rarely will sufficient workload reduction be realized to justify reducing your staff size. As your practice expands, you can consider the savings realized by not requiring additional employees to handle your increased manual workload.

Step 4: "System Analysis"

An affirmative answer to the questions posed in this article indicates your thorough evaluation for the implementation of a computer system. This information should now be developed into a system analysis.

A system analysis is a review of your expectations and job requirements to determine the appropriate configuration of a computer system. A system analysis will give you an excellent idea of the actual equipment needs and the types and cost of programs required to carry out your request. This report will enable you to obtain bids from computer vendors

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4	$28,500	20%	$5,700	$2,850	21%	$5,985	$2,992.50
5	$28,500	20%	$5,700	$2,850	21%	$5,985	$2,992.50
6	$28,500	10%	$2,850	$1,425			
			Total Tax Savings	$17,250			$17,250
			Total Net Cost of $30,000 Computer: $12,750				

*Assumes you are taxed at the 50 percent rate.

CHART #1

This chart illustrates the savings in taxes on a $30,000 computer. With a net cost of $12,750 over a five-year life that IRS assigns to the equipment, your computer will cost you less than $213 a month or about $9 a day. When the five years are up, your computer will be working for you free of charge.

while insuring that adequate attention has been given to your present and future needs. Many questions are in a system analysis that are not usually considered by the novice customer.

Select a local consulting firm that has expertise in the computer and accounting fields but who is not aligned with any particular computer company. A system analysis is worth the investment. [The KMA is also reviewing the possibility of offering a similar service (at cost) to the membership.]

The results of this analysis will enable all parties (physicians, their staff, the consultant and computer vendors) to select the most efficient equipment for their office.

Text: Joe Witherington, Jr.—Currently System Manager for KMA and KMIC. Experience includes five years in computers and over 11 years in the health care field.

Summary

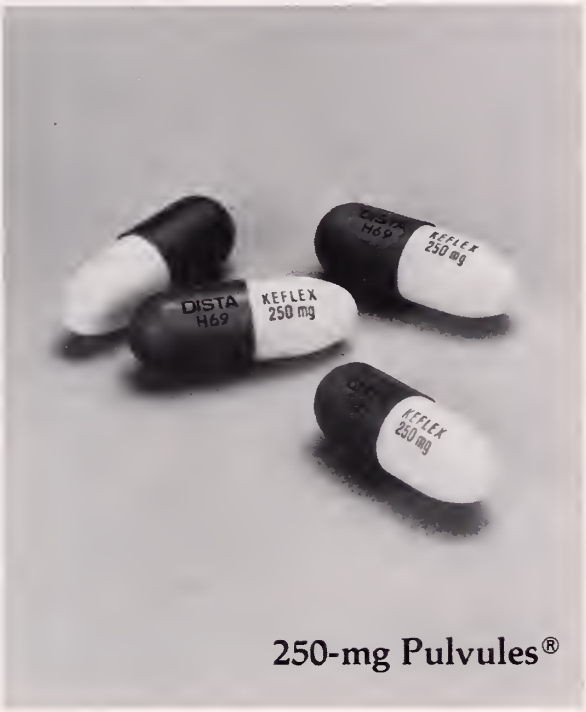
Adequately planning and considering all options available will enable you to determine the appropriate time to enter the computer market. There is no doubt that a computer system could assist your practice, but it must be designed to meet your needs and that of your employees. Learn from the problems encountered by others, and by all means take the time to become familiar with the benefits and disadvantages of computerization.

In the next issue we will examine the basic components of a computer and what the novice should know about the functions of a system. Should you have a particular question concerning this article please feel free to contact me by mail or phone.

"Questioning The Need"

1. Is it time to automate your office practice?
2. Does your staff require a computer system to meet their daily job?
3. Is your staff adverse to change in office policy?
4. What savings in personnel time and materials will be realized with a computer system?
5. What benefits can you deduce from the addition of a computer to your office? What disadvantages?
6. How much of an investment can you justify for a computer system?
7. Can you cost-justify this expense?
8. What are your expectations of an automated office?
9. Can you define precise objectives for the computer to meet?
10. What additional benefits besides your office practice do you expect?

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MEDICAL STUDENT SECTION

New Beginnings

The KMA Medical Student Section (MSS) now has its Constitution and Bylaws. They were approved at the KMA House of Delegates Annual Meeting in September. We, your Governing Council, bid you welcome, and look forward to working with all students and physicians of the state.

Our first program will be to set up a short series of lectures given by staff at both the University of Louisville School of Medicine and the University of Kentucky College of Medicine. This series will deal with student health and the hazards to which medical personnel are exposed. This program, as of yet untitled, began in January 1983.

Other programs are being proposed. Anyone who would like to see the KMA-MSS start a program of interest to the students is invited to talk with any Governing Council member. We would appreciate any suggestions.

Part of the duties of the KMA-MSS is to appoint members from the students to the various committees of the KMA. A list of this year's members and their committees follows at the end of this section. Anyone who has any suggestions or issues for any of these committees may contact the student members. Their addresses are listed here also. Please do not hesitate to contact any of us.

Minutes of the Governing Council Medical Student Section, KMA September 22, 1982

Those present were Britt Brockman, Scott Chapman, Sue Ellen McGee, and Steve Wilson from the University of Louisville and Gary Browning, Daune Daugherty, and Keith Hornung from the University of Kentucky.

Officers for 1982-83 were elected. President—Gary Browning. Chairman—Steve Wilson. Secretary-Treasurer—Daune Daugherty.

The 1982-83 budget was discussed. It was moved that the budget be as follows:

$ 600	Travel to MSS-AMA Interim Meeting (½ to UK & ½ to UL)
$1200	Travel to MSS-AMA Annual Meeting (½ to UK & ½ to UL)
$ 200	Miscellaneous expenses necessary to carry out the business of the MSS.

The motion was seconded and adopted.

The MSS editorial page in the *Journal of the Kentucky Medical Association* was discussed. Steven Wilson volunteered to edit the page. It was suggested that the minutes be published there. Governing Council members were encouraged to prepare and submit articles for publication.

The Governing Council nominated students from the two schools to serve on KMA committees and forwarded the list to the KMA Board of Trustees.

Projects for the year were discussed. A program on the health hazards encountered in medical school was considered.

The next meeting of the Governing Council was set. It will be November 21, 1982 at 1:30 P.M. at the University of Louisville School of Medicine.

The meeting was adjourned.

Any contribution to this section by any student will be greatly appreciated. Please send any articles, letters, cartoons, etc. to: Steven Wilson
9015 Old Whipps Mill Rd.
Louisville, KY 40222

We reserve the right to edit any contributions.

KENTUCKY MEDICAL ASSOCIATION MEDICAL STUDENT SECTION

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1. Gary Browning (UK)—President, Governing Council
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 Lexington, KY 40536
2. W. Steven Wilson (UL)—Chairman, Governing Council
 KMA Delegate
 Editor, KMA-MSS Journal Section
 9015 Old Whipps Mill Rd.
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MEDICAL STUDENT SECTION

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8. Bill Mahoney, Jr. (UK)—KMA Delegate
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 Lexington, KY 40536
9. Sue Ellen McGee (UL)—Delegate-at-large
 840 River Dell Court #L-6
 Louisville, KY 40206
10. Diane Schneider (UL)—AMA Delegate
 835 River Crest Drive
 Louisville, KY 40206

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1982-1983

1. **Scientific Program Committee**
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 410 Mockingbird Valley Rd. #8
 Louisville, KY 40207
2. **Scientific Exhibits Committee**
 UL—Bob Allen
 5116 Fay Ave.
 Louisville, KY 40214
3. **Cancer Committee**
 UL—Larry Schaper
 1628B S. 4th Street
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 UK—Gary Browning
 P.O. Box 540
 UK Medical Center
 Lexington, KY 40536
4. **Emergency Medical Committee**
 UL—Boz Tabler
 5808 Brittany Woods Circle
 Louisville, KY 40222
 UK—Donna Gibson
5. **Maternal Mortality Study Committee**
 UL—Sue Ellen McGee
 840 River Dell Ct. #L-6
 Louisville, KY 40206
6. **Committee on Maternal and Child Health**
 UL—Steve Fischer
 2821 Eleanor Ave.
 Louisville, KY 40205
7. **Committee on Community and Rural Health**
 UL—Steve Wilson
 9015 Old Whipps Mill Rd.
 Louisville, KY 40222
 UK—Gwendolyn Cambron
 P.O. Box 14
 UK Medical Center
 Lexington, KY 40536
8. **Committee on School Health, Physical Education, and Medical Aspect of Sports**
 UL—Dan Varga
9. **Membership Committee**
 UL—Anthony Atala
 842 River Dell Ct. #M-7
 Louisville, KY 40206
 UK—W. Keith Hornung
 P.O. Box 593
 UK Medical Center
 Lexington, KY 40536

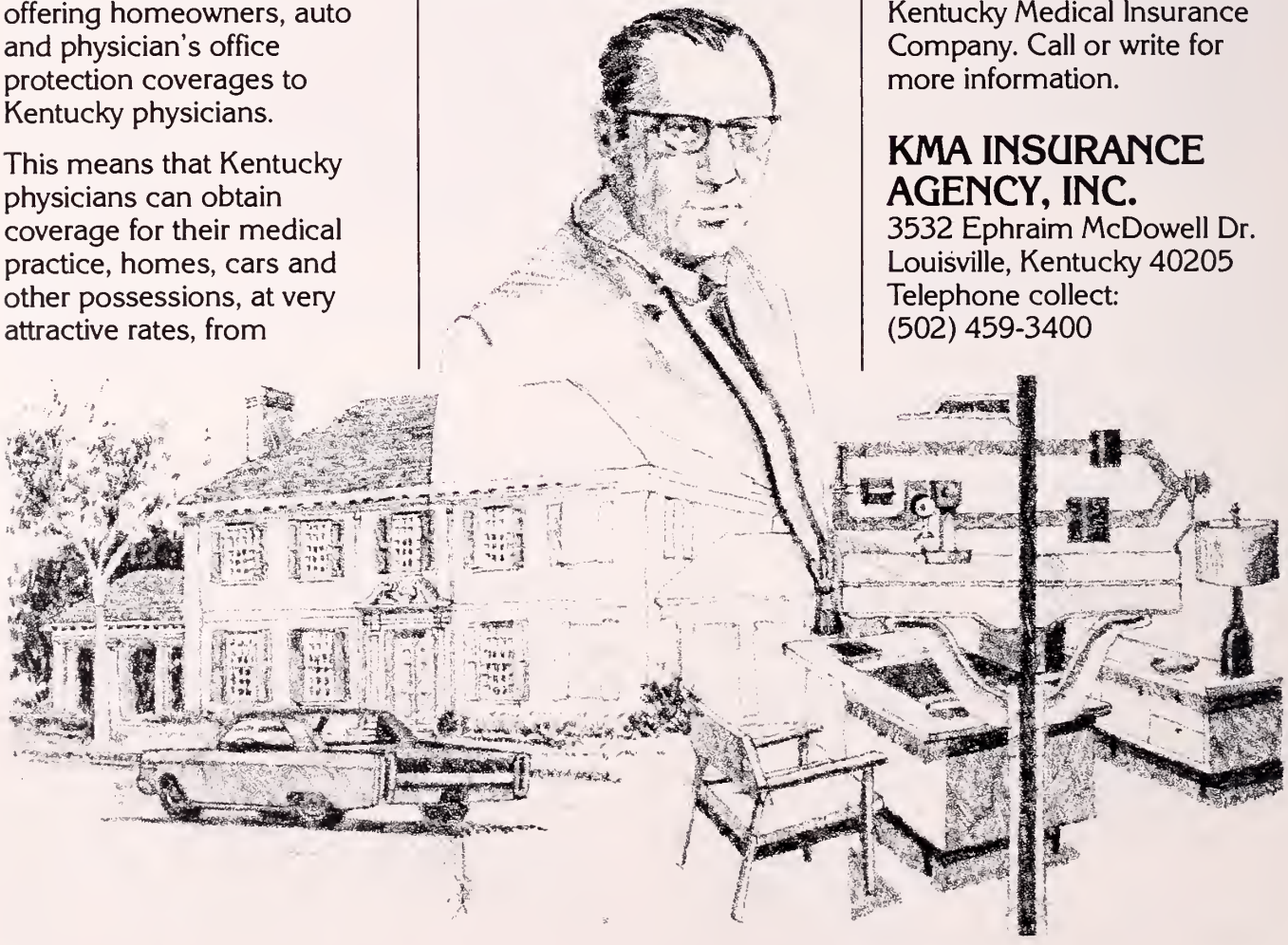
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(502) 459-3400

LETTERS TO THE EDITOR

The Letters To The Editor column is a means for the KMA physicians to express their opinions and viewpoints on varied topics. If you have an item you would like brought before your fellow practitioners, please submit it to Letters To The Editor, Kentucky Medical Association, 3532 Ephraim McDowell Dr., Louisville, Kentucky 40205. Communications should not exceed 250 words. The right to abstract or edit is reserved by the editors of the *Journal*. Names will be withheld upon request, but anonymous letters will not be accepted.

To The Editor:

The hospital autopsy rate in the United States has dropped over the past 20 years. The same trend has been observed in our hospital. The autopsy rate has consistently declined (1966-27.8%; 1980-16%; and 1981-13%). The decline has been observed despite the significant role in which the autopsy has played in health care for at least the past two centuries. As Morgagni noted, "Those who have dissected or inspected many bodies, have at least learned to doubt; when others, who are ignorant of anatomy and do not take the trouble to attend to it, are in no doubt at all." The following reasons have been given for the decline in autopsies:

1. **Diagnoses are usually established during life.** This despite numerous studies illustrating that in up to half of the cases the immediate cause of death or an additional disease contributing to death had not been correctly identified prior to autopsy. In 16% of the cases the primary diagnosis was inadequate. In addition, the primary purpose of an autopsy is not to correct diagnoses, but to increase our understanding of the patient's disease and response to therapy.

2. **Nothing new is learned from the autopsy.** Autopsy studies have increased our awareness of occupational and environmentally induced diseases. Autopsies also illustrate the usefulness of the various modalities of modern therapy.

3. **The family objects to the autopsy on religious grounds.** There is no Christian law of Papal writing that forbids human dissection. A modern interpretation allows for autopsy even in cases involving the most orthodox Jews. In summary, a religious proscription against autopsy is rarely a determining factor in failing to obtain permission, if the autopsy is medically indicated.

4. **It takes too long to get the results.** Unfortunately this is true. Our department, however, issues within 24 hours a summary of the gross anatomical findings (including sections necessary to confirm the gross findings). The summary should contain the primary disease, cause of death, and significant contributory diseases.

5. **Physicians today are too busy to visit the autopsy room.** This is unfortunate and is due to many factors: The de-emphasis of pathology in medical school curricula, misconceptions about the accuracy of premortem diagnosis, and, I hope not in our department, pathologists not interested in the autopsy.

6. **The autopsy results lend support to a malpractice suit.** Documented instances where the performance of an autopsy has been a major factor in a malpractice suit are exceedingly rare.

7. **The family doesn't want the body mutilated.** It must be remembered that the autopsy is not a mutilating procedure and it is perhaps less so than the embalming procedure.

8. **Families are less willing to give autopsy permission than they used to be.** There is no evidence for this contention. Obtaining autopsy permission is directly related to the physician's interest in the autopsy.

9. **Autopsies are too costly for the information derived.** Unfortunately there is a cost for performing any procedure. As these costs are not reimbursed, they must be absorbed by the hospital. I feel, however, the small cost of the autopsy in the total operating budget of the hospital is a small price to pay for the benefit derived.

What then is the role of the autopsy in the 20th century? I feel the role of the autopsy is the same as it has been for the past 200 years and that is to ensure the finest quality of medical care for our patients. Today, accreditors are fond of such terms as quality assurance. The autopsy is the single most reliable means of confirming, clarifying, and correcting diagnoses, determining the accuracy and applicability of new diagnostic modalities and of evaluating the efficacy and complications of new forms of therapy and gauging the quality of surgical procedures.

LETTERS

I hope I have been of some help by reviewing the status of autopsies at Methodist Evangelical Hospital. I appreciate your interest in this situation and I will be happy to assist in any way in making autopsies more meaningful for our physicians.

Charles T. Lucas, M.D.
Director of Laboratories
Methodist Evangelical Hospital

References: 1. Geller, Stephen A., To See or Not To See: The Status of the Autopsy at the Mount Sinai Medical Center, Mount Sinai Journal of Medicine, 46:33-38, 1979. **2.** Roberts, William C., The Autopsy: Its Decline and a Suggestion For Its Renewal, New England Journal of Medicine, 299:332-338, 1978. **3.** Sandritter, W., et. al., Autopsy and Clinical Diagnosis, Path. Res. and Prac., 168:107-114, 1980.

Are you concerned about what your drinking is doing to you? — to your practice? — to your family?

For Help Call

COMMITTEE ON IMPAIRED PHYSICIANS
502/459-9790

Health and Safety Tip From the American Medical Association

MARKERS LISTED TO IDENTIFY ALCOHOLICS

How can you tell that a regular, heavy drinker has crossed over the line and become an alcoholic, who no longer can control his or her drinking?

The American Medical Association in its Manual on Alcoholism points to some markers to help identify the alcoholic.

1. Increasing consumption of alcohol, with frequent, perhaps unintended, episodes of intoxication.

2. Drinking to handle problems or relieve symptoms.

3. Obvious preoccupation with alcohol and the frequent need to have a drink.

4. Surreptitious drinking or gulping of drinks.

5. Tendency toward making alibis and weak excuses for drinking.

6. Refusal to concede what is obviously excessive consumption and expressing annoyance when the subject is mentioned.

7. Frequent absenteeism from the job, especially following weekends and holidays.

8. Repeated changes in jobs, particularly if to successively lower levels, or employment in a capacity beneath ability, education and background.

9. Shabby appearance, poor hygiene, and behavior and social adjustment inconsistent with previous levels or expectations.

10. Persistent vague physical complaints without apparent cause, particularly insomnia, stomach upsets, headaches, loss of appetite.

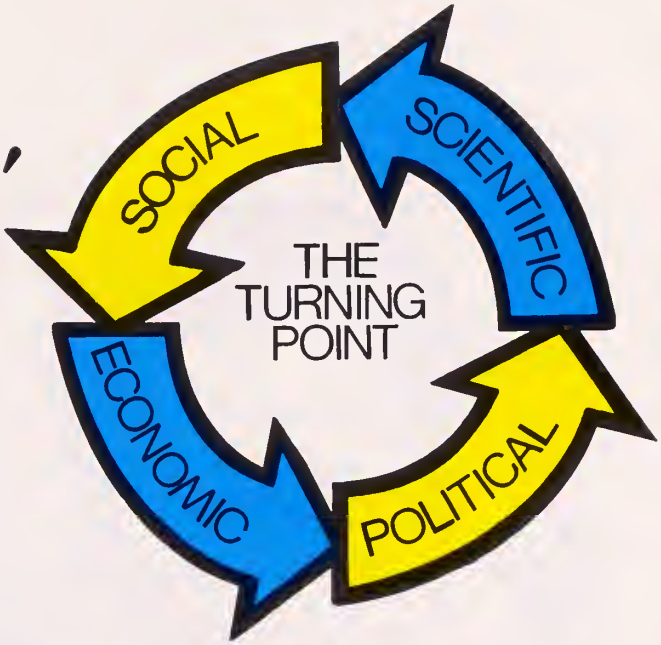
11. Multiple contacts with the health care system with disorders that are alcohol caused or related.

12. Persistent marital and family problems, perhaps with multiple marriages.

13. History of arrests for drunkenness or drunken driving.

Submitted by the KMA Impaired Physicians' Committee

"The Turning Point"



Wednesday Morning, March 16, 1983

Optional For Conference Participants

8:00 a.m. **Registration**
Grand Ballroom

9:00 a.m. **Financial Controls in Your Practice**
Connie S. Henderson, Chicago
Program Director, Department of Practice Management
American Medical Association

10:00 a.m. **Break**

11:45 a.m. **Lunch—Rathskeller**

Wednesday Afternoon, March 16, 1983
Grand Ballroom

12:30 p.m. **Presiding/Opening Remarks**
Dwight L. Blackburn, M.D.
President, Kentucky Medical Association

12:45 p.m. **What Doctor's Need to Know About Money Management and Investment**
Chris M. LeMay, Louisville
Institutional Investment Broker, Prudential Bache Securities

1:30 p.m. **The Future of Computers in Physicians' Offices**
Connie S. Henderson, Chicago, Illinois
Program Director, Department of Practice Management
American Medical Association

2:30 p.m. **Break**

2:45 p.m. **Trends in Employee Benefits—A Business Perspective**
William J. O'Conner, J.D., CPA, New York
Vice President, Philip Morris, Inc.

3:15 p.m. **Trends in Reimbursement—A Payors Perspective**
Avil L. McKinney, Louisville, Kentucky
President, Blue Cross and Blue Shield of Kentucky, Inc.

3:45 p.m. **Frustrations of a Cost Conscious Physician**
Russell W. H. Kridel, M.D., Houston, Texas

4:30 p.m. **Adjourn**

Wednesday Evening, March 16, 1983

6:00 p.m. **Social Hour—Mezzanine**

6:45 p.m. **Dinner—Grand Ballroom**
Dwight L. Blackburn, M.D., Presiding

7:30 p.m. **Inside Report—Washington's Plans for Health Care**
Robert D. Novak, Washington, D.C.
Washington Columnist

Thursday Morning, March 17, 1983

7:30 a.m. **Registration**
Grand Ballroom

8:00 a.m. **Continental Breakfast**
Grand Ballroom Foyer
Richard F. Hench, M.D.
Chairman, Board of Trustees, Presiding

8:45 a.m. **Organized Medicine—Today and Tomorrow**
Edward R. Annis, M.D., Miami, Florida
Past President, American Medical Association

9:30 a.m. **Break**

9:45 a.m. **Professional Liability—A Look Into the Future**
Carl L. Wedekind, Jr., Louisville, Kentucky
President, Kentucky Medical Insurance Company

10:10 a.m. **Marketing Strategies for Private Practice**
Richard Endress, Chicago, Illinois
Program Director, Department of Practice Management
American Medical Association

11:10 a.m. **The Economic Outlook for Physicians**
Paul J. Feldstein, Ann Arbor, Michigan
Professor, Department of Hospital Administration and Department of Economics, The University of Michigan

12:00 p.m. **St. Patrick's Day Luncheon**
Rathskeller

Thursday Afternoon, March 17, 1983
Grand Ballroom

Robert C. Burkhart, M.D., Presiding
President, Kentucky Peer Review Organization

1:15 p.m. **Facing Future Realities—The Geriatric Imperative**
Anne Ramsay Somers, Piscataway, New Jersey
Professor, Environmental and Community Medicine and Family Medicine, Rutgers Medical School

3:00 p.m. **Break**

2:00 p.m. **The Future is Now—There Is No Status Quo**
John Elkins, Denver, Colorado
Trend Analyst
The Naisbett Group

2:45 p.m. **Wrap Up With Questions and Answers**
Dwight L. Blackburn, M.D.

3:00 p.m. **Adjourn**

REGISTRATION LIMITED TO 300 PARTICIPANTS

Special Seelbach rates for participants—$50.00 single or double if reserved prior to February 20, 1983

The TURNING POINT Conference is open to all members of the Kentucky Medical Association, their spouses and other medically-related groups. A registration fee of $125.00 per person, or $200.00 for physician and spouse, will be charged and will include lunch, social hour and dinner on March 16, continental breakfast and lunch on March 17. Lodging reservations may be obtained by contacting The Seelbach Hotel at 800-626-2032 or 502-585-3200.

PLEASE REGISTER ME FOR THE CONFERENCE (INCLUDE PAYMENT WITH REGISTRATION FORM)

☐ Member ☐ Register me for the Bonus 2½ hour program on Wednesday morning

☐ Spouse _____

Name

Mailing Address

City State Zip Code Phone

Return to: Kentucky Medical Association
3532 Ephraim McDowell Drive
Louisville, KY 40205

- This program has been reviewed and is acceptable for 9 Prescribed hours by the American Academy of Family Physicians.
- The Kentucky Medical Association has approved this program for 12½ hours of Category I Credit.

"The Turning Point"

Maintaining health care benefits for employees has become an urgent problem, as business grapples with rising costs and a troubled economy. Deductibles and co-pay provisions are rapidly becoming commonplace in the health insurance market place. In addition, the Reagan Administration has indicated that the "tax cap" concept—a limitation on the current exclusion of employee-paid insurance premiums from an employee's income, will be included in the forthcoming "Competition Proposal." These and other trends create an opportunity for physicians and businesses to coordinate and develop new mechanisms which assure quality of health care yet reduce overall costs.



William J. O'Conner, J.D., CPA

"The Turning Point"

It is forecasted that 65-70% of hospitals in the United States will become captives of "investor owned" or "groups of not-for-profit hospitals" by 1990. Profit margins will be of utmost concern, with a declining emphasis placed upon medical staffs. Coupled with an over population of physicians, the voice of the individual practitioner will be diminished along with their concerns for patient care. What does the future hold for the role of the "private" physician; and how can he maintain his influence in hospital management and patient care? A competitive edge through early identification and understanding of this phenomenon is crucial. Anticipating and responding to developing trends in health care is a must for physicians if they and their predecessors are to survive as a profession.



John Elkins



SMOKING "CAUSED" IT.

Smoking. Chronic Obstructive Pulmonary Disease. And LUFYLLIN. The three are closely related. And the reason is clear. Of all C.O.P.D. cases, 75% to 80% are related to cigarette smoking.[1]

Smoking has another insidious effect. *It alters liver function* by inducing microsomal enzymes. And that's where LUFYLLIN comes in. LUFYLLIN is a bronchodilator with a metabolic advantage for "smoker's disease." *It's not metabolized in the liver.* That's vitally important because altered liver function comes not only with cigarette smoking...but with age, cirrhosis, congestive heart failure and some drug therapy.

All these liver function altering factors may cause serum level fluctuations—something you can avoid with LUFYLLIN. You can also minimize problems with side effects.

That's enhanced control. That's LUFYLLIN.

*Only in Chronic Obstructive Pulmonary Disease with reversible bronchospasm.

1. National Interagency Council on Smoking and Health. *The Smoking Digest.* Progress Report on a Nation Kicking the Habit 1977.

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(dyphylline)

A bronchodilator with a metabolic advantage for "smoker's disease."

LUFYLLIN®-400
(dyphylline) TABLETS

Please see following page for prescribing information.

LUFYLLIN® (dyphylline) Tablets
LUFYLLIN®-400 (dyphylline) Tablets
Before prescribing, please consult full product information, a brief summary of which follows:
Indications: For relief of acute bronchial asthma and for reversible bronchospasm associated with chronic bronchitis and emphysema
Contraindications: Hypersensitivity; use with other xanthines.
Warnings: Status asthmaticus is a medical emergency. Excessive doses may be expected to be toxic.
Usage in Pregnancy: Safe use in pregnancy has not been established; do not use in pregnant women unless the potential benefits outweigh the possible hazards.
Precautions: Use with caution in patients with severe cardiac disease, hypertension, hyperthyroidism, acute myocardial injury, congestive heart failure, or peptic ulcer. Chronic high dosage is usually associated with gastrointestinal irritation.
Adverse Reactions:
Gastrointestinal—irritation, nausea, vomiting, epigastric pain, headache, hematemesis, diarrhea.
Central Nervous System—stimulation, irritability, restlessness, insomnia, reflex hyperexcitability, muscle twitching, clonic and tonic generalized convulsions, agitation.
Cardiovascular—palpitation, tachycardia, extrasystoles, flushing, marked hypotension, and circulatory failure.
Respiratory—tachypnea, respiratory arrest.
Renal—albuminuria, increased excretion of renal tubule and red blood cells.
Others—fever, dehydration.
Overdosage:
Symptoms—In infants and small children: agitation, headache, hyperreflexia, fasciculations, and clonic and tonic convulsions. In adults: nervousness, nausea, vomiting, tachycardia, and extrasystoles.
Therapy—No specific treatment. Discontinue drug immediately. Provide supportive treatment as indicated. Ipecac syrup for oral ingestion. Avoid sympathomimetics. Sedatives such as short-acting barbiturates help control CNS stimulation. Restore the acid-base balance with lactate or bicarbonate.
Drug Interactions: Toxic synergism with sympathomimetic bronchodilators may occur.
Dosage and Administration:
Usual Adult Dosage—15 mg/kg every 6 hours, up to four times a day. Titrate the dosage individually.
How Supplied:
LUFYLLIN Tablets: (Each white, rectangular, monogrammed tablet contains 200 mg dyphylline):
NDC 0037-0521-92, bottle of 100.
NDC 0037-0521-97, bottle of 1000.
NDC 0037-0521-85, box of 100 unit-dose individually film-sealed tablets.
LUFYLLIN-400 Tablets: (Each white, capsule-shaped, monogrammed tablet contains 400 mg dyphylline):
NDC 0037-0731-92, bottle of 100.
NDC 0037-0731-97, bottle of 1000.
NDC 0037-0731-85, box of 100 unit-dose individually film-sealed tablets.
Caution: Federal (U.S.A.) law prohibits dispensing without prescription.
A7368 March, 1981
REV 7/80
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Cranbury, New Jersey 08512

IN MEMORIAM

AVROM M. ISAACS, M.D.
1920-1982
Louisville

Avrom M. Isaacs, M.D., died December 5, 1982, at his home. He was a retired urologist, an assistant clinical professor of pharmacology and toxicology at the University of Louisville School of Medicine and past president of the Jewish Hospital medical staff. He received his medical degree from the University of Louisville School of Medicine in 1943. Doctor Isaacs was a member of the American Urology Association, the American, Southern and Jefferson County medical associations, and had been a member of KMA since 1952 serving on the Committee on Medicine and Religion from 1962 to 1966.

WILLIAM H. SMITH, M.D.
Paducah
1921-1982

William H. Smith, M.D., a radiologist from Paducah, died in November of 1982. Doctor Smith was a 1945 graduate of the University of Louisville School of Medicine and had been a member of KMA since 1951.

MORRIS H. THOMPSON, M.D.
Louisville
1903-1983

Morris H. Thompson, M.D., died January 14, 1983. Doctor Thompson was an internist in Louisville. A graduate of the University of Louisville School of Medicine, he had been a member of KMA since 1952.

The following article first appeared in the June, 1981 issue of the KMA *Journal*. The article discusses how the various components of the KMA peer review system function. Since the 1981 publication, court decisions have effectively prohibited KMA from conducting fee review. Because of this change and increased public attention on the medical profession through various media, the article has been updated and has been reprinted here for the benefit of the membership.

Summary Description of Components of The Peer Review System

The KMA Peer Review System consists of judicial and grievance committees, peer review or claims and utilization review committees and committees on impaired physicians. These groups were established to satisfy questions of ethics and conduct, deal with disputes between physicians, disputes between physicians and patients, disputes between physicians and medical care payors and to identify and aid physicians with impairments.

Each component was created to deal with a specific area of physician activities. Matters identified in one area may more appropriately be handled by one of the other components or by more than one group simultaneously. The functions of each group are important individually, but coordination of the interrelationship between all is vital.

At the state level, the KMA Judicial Council considers matters involving ethics and conduct, and grievances; the Claims and Utilization Review Committee deals with questions of medical practice; and the Committee on Impaired Physicians deals with situations involving physician impairments.

Components of the System and Their Functions

JUDICIAL COUNCIL

Through the Constitution and Bylaws, precedent situations, traditionally held principles and other appropriate documents, establish guidelines and render opinions regarding appropriate conduct and ethics of members.

Subcomponents

County society judicial councils or grievance committees—appointed through a mechanism of the county societies. Function utilizing self-development guidelines. It may not be feasible for all counties to develop such groups. Both judicial and grievance functions can be undertaken by the same group, or two separate bodies.

District grievance committees—appointed by the KMA Judicial Council to consist of the Trustee of the District concerned and Trustees from two adjoining Districts. Activated when the individual Trustee can't resolve a grievance. District Committees report to the KMA Judicial Council if the grievance is without merit and report all actions taken otherwise.

KMA Judicial Council—a five-member body which includes the KMA Secretary-Treasurer and is appointed by the House of Delegates. Acts as a final arbiter of questions involving rights of members in relation to other members, county societies and KMA. No report or opinion of the Judicial Council becomes Association policy until approved by the House of Delegates.

AMA Judicial Council—appointed by the AMA House of Delegates.

Procedures

Grievances, questions of ethics or conduct must be given to the Judicial Council in writing. Grievances may be filed by individual physicians, hospital staffs, insurance carriers or payors, patients, individual citizens or outside organizations.

When a grievance is received, it is referred to the appropriate Trustee. The Trustee may refer it to a county judicial council or grievance committee for action. Where none exists, the Trustee investigates the matter for validity and attempts to resolve it first-

hand, or reports his findings to the KMA Judicial Council. The KMA Council may then refer the matter to a District Grievance Committee, when appropriate, or undertake it directly. No recommended disciplinary action recommended by a District Trustee or District Grievance Committee is to become effective unless approved by the KMA Judicial Council. All reasonable steps are to be taken by the Council to insure that all parties to a grievance have adequate opportunity to express themselves, including conduct of hearings and representation by legal counsel and other due process procedures.

Affected physicians may appeal disciplinary orders from county societies to the KMA Judicial Council. The KMA Council's decisions shall be final.

Members affected by disciplinary rulings may appeal these findings to the AMA Judicial Council. In those situations requiring a determination of proper conduct or ethics that constitute singular questions and do not directly involve an individual, the Council will render an opinion, based on any precedent, traditionally held principles and other appropriate resources.

Possible Actions by the Judicial Council

- Find a grievance to be groundless.
- Arbitrate and try to resolve grievances between physicians, physicians and patients, hospital staffs and others.
- Depending on the circumstances and observing due process procedures, censure, fine, suspend or expel a member.
- Refer matters to other components of the system.
- In situations which may pose questions of legal improprieties, refer matters to the Board of Medical Licensure.
- Patient complaints concerning the appropriateness, necessity and utilization of medical services are referred initially and informally to the peer review component. The attending physician is contacted for any comments he might like to make regarding the complaint and this response, together with any available medical records, is informally considered by the appropriate specialty consultant of the state peer review committee. If the consultant feels that the service in question was appropriately rendered both the complaintant and the physician are so advised. If the service in question was not appropriate the matter is then referred back to the Judicial Council for further discussion with the attending physician.

PEER REVIEW

Adjudicate questions of utilization of services, necessity of hospital admissions and lengths of stay, and practice patterns relating to quality of care.

Subcomponents

Hospital—(local) peer review committees—appointed by hospital medical staff to fill Medicare, and other requirements. May perform other third party review. Not appointed by KMA, so there is no formal relationship. Claims review assignment is at the discretion of the District Peer Review Committee chairman on carrier for claims sent directly to KMA.

County Society Peer Review Committees—Appointed through a mechanism developed by the county society. Claims sent to KMA are referred directly to counties.

District Peer Review Committees—Appointed by the Trustee. Membership should reflect appropriate specialty mix and county and physician population representation.

Claims and Utilization Review Committee—A standing Committee appointed by the Board of Trustees. Membership chosen to reflect all specialties, proportionately, and geographic representation of the state. Prior work with a local committee is desirable. CURC acts as administrative head of the peer review system.

Procedures

Claims Initiation—Accomplished by attending physician, a third party payor, insurance company, self-insured group or governmental medical care program administrative agency.

Claims Processing—A minimum of 10 copies of a claim to be reviewed is submitted to the Headquarters Office and then mailed directly to the appropriate committee members, individually. At the discretion of the local Committee chairman, a meeting is called, which should include input by the attending physician. The Committee's recommendation is forwarded to the Headquarters Office, which in turn, notifies the carrier. The District Committee usually will notify the attending physician of its decision. Any party to the review may request appellate review at the next level if the Committee recommendation is unsatisfactory.

Attending physicians are notified of the claim submission. Attendance at the meeting by the attending physician and notification of the Committee's recommendation are desirable, but left to the discretion of the local Committee. Both of these actions are formal procedures of the CURC, as is notification of

the District Committee Chairman and Trustee both of the claim submission and the CURC recommendation, if different from that of the local Committee.

Carrier representatives are also required to attend meetings of the CURC, where the case is discussed with both the attending physician and the carrier. CURC recommendations are arrived at in private session.

Possible Recommendations by the Peer Review Committee

- Affirm the appropriateness of the services, services provided, admission of patient, length of stay and practice patterns.
- Recommend the appropriateness of a portion of the services provided; partial allowance of hospital stay or disallowance of admission; and question or advise the attending physician on practice patterns. In the case of government medical care programs, suspension from participation or ongoing review can be recommended.
- Referral to one of the other components of the KMA system.
- Challenge question or recommend change to the procedures used by the payor either directly or through the Board of Trustees.

COMMITTEE ON IMPAIRED PHYSICIANS

Helps to identify physicians with impairments of a nature that affect their medical practice and private lives; helps the physician confront his problems; assists in rehabilitation and resumption of a productive life.

Subcomponents

Local committees on impaired physicians—appointed through a mechanism of the county medical society.

KMA Committee on Impaired Physicians—appointed by the Board of Trustees to consist of members who have had first-hand experience with physician impairments, either as formerly impaired individuals, or as attending physicians.

Procedures

Procedures followed are guidelines only, as each situation usually requires individual consideration. General procedures are that physicians with suspected impairments are reported to the Headquarters Office or a member of the Committee whose names and addresses are published periodically in the *Journal*. This reporting can be done anonymously. Confirmation of the impairment is sought by the Chairman or one of the members through contacts with Trustees, local colleagues or personally. Once an impairment is confirmed, the physician is confronted for discussion, to confirm the impairment and to seek self-admission of the problem. If no life-threatening circumstances are apparent, a process of treatment and possible rehabilitation is begun, which includes the assistance of colleagues, family and treating physician. In this process the Committee has access to individual physicians with expertise in the field, as well as noted institutions. In the event that a life-threatening circumstance is encountered, immediate steps are taken to cease the physician's practice and begin immediate treatment. In the event that a local committee exists, the KMA Committee defers to it or works in conjunction with it at the local committee's request.

Possible Actions

The Committee has no punitive authority, nor was it established to exercise any. All actions taken are of a benevolent nature, with the intent to assist the impaired physician. All activities must be agreed to voluntarily by the impaired physician, with the exception of life-threatening circumstances, which are the purview of the Board of Medical Licensure. The Committee works in loose concert with the Licensure Board and reports informationally to the Judicial Council.

Coordination of the activities of these groups is provided by the Peer Review Council, whose members are the Chairmen of the KMA Judicial Council, KMA Claims and Utilization Review Committee and Committee on Impaired Physicians, as well as the Vice Speaker of the House of Delegates and a member of the Board of Trustees. The referral of any matter involving physicians' activities is decided by this group, which also coordinates any interrelated activities. In the event that a matter referred to KMA does not appropriately fall within the responsibility of any of the components, the Council further refers the matter to the Board of Trustees or the Board of Medical Licensure, as appropriate. This applies to both physician-initiated and non-physician initiated situations.

While the peer review system has sanctionary aspects, it is most important to note that its activities employ an equal advocacy mechanism for members to seek regress and resolution of problems encountered with other members and external groups.

The ultimate goal of peer review is to educate and rehabilitate—not to punish. This goal must be weighed by the facts and consideration of the pro-

tection of society as a whole and as individuals. The value of improving the performance of an errant colleague is worth far more to society, to the profession and to the individual physician, than any punitive action which reflects on the entire profession.

MEMBERS IN THE NEWS

Robert K. Johnson, M.D., was installed January 19, 1983, as the new president of the Medical Staff of the St. Elizabeth Medical Center. Doctor Johnson, an orthopaedic surgeon, has been a member of the St. Elizabeth staff since 1968. He received his medical degree from the University of Iowa and is in a private practice group. Doctor Johnson is a member of the American Board of Orthopaedic Surgery, the American Academy of Orthopaedic Surgery, the Kentucky Orthopaedic Soceity, the Cincinnati Orthopaedic Club and the Kentucky Medical Association.

Hoyt D. Gardner, M.D., Louisville, Past President of the AMA, KMA and JCMS, was recently elected to the National Blue Cross-Blue Shield Board of Directors. Doctor Gardner is also a member of the Kentucky Blue Cross-Blue Shield Board of Directors.

Fred C. Rainey, M.D., Elizabethtown, has been elected 1983 Chairman of the American Medical Political Action Committee. A Past President of KMA, Doctor Rainey is a former Chairman of KEMPAC. He presently serves Kentucky as Delegate to the AMA House of Delegates and is Chairman of the AMA Council on Legislation.

Plan Now To Attend

The Emergency Medical Care Seminar

June 14, 15 & 16, 1983

Executive West, Louisville

Postgraduate Page

MARCH

1-4 The University of Texas System Cancer Center, "Cancer Invasion and Metastasis, 36th Annual Symposium on Fundamental Cancer Research, Shamrock Hilton Hotel, Houston, TX

2-3 Methodist Hospital of Indiana, Inc., Second Annual Pediatric Critical Care Symposium, Sheraton West Hotel, Indianapolis

7-9 NIH Consensus Development Conference, Critical Care Medicine, Masur Auditorium, Warren Grant Magnuson Clinical Center, Maryland

11-13 Advanced Cardiac Life Support Provider/Instructor Course, University of Kentucky Medical Center, Lexington

18-20 Southern Medical Association, Medical Staff Leadership Seminar, Sarasota, Florida

20-24 32nd Annual Scientific Session of American College of Cardiology, New Orleans, LA

28-30 University of Cincinnati Medical Center, Symposium on "Assessment and Remediation of Central Auditory-Language Disorders," Cincinnati, OH

31 Twenty-eighth Annual Spring Clinical Conference, "Specialty Problems in Primary Care," Lexington Clinic, Lexington, KY

31-1 12th Annual Medical Aspects of Sports Symposium: Prevention & Treatment of Athletic Injuries, Hyatt Regency Hotel, Lexington

APRIL

East Tennessee State University, Orthopaedic Operating Room Nurses: Implants and Instrumentation Techniques, Johnson City, TN

7-9 Harvard Medical School, CME Course on Waking, Sleeping and Dreaming, Parker House Hotel, Boston, Mass.

11-14 64th Annual Session of the American College of Physicians, Moscone Center, San Francisco, CA

15-16 Frontiers in Endocrinology and Metabolism, Hyatt Regency Hotel, Lexington

18-29 24th Postgraduate Institute for Pathologists in Clinical Cytopathology, The Johns Hopkins University School of Medicine, Baltimore, MD

21-23 Diagnosis and Treatment of Common Human Tumors, Hyatt Regency Hotel, Lexington

21-23 High Risk Pregnancy, Seelbach Hotel, Louisville

21-23 American Cancer Society, Kentucky Division, Presents a Physicians Conference on "Diagnosis & Treatment of Common Human Tumors," Hyatt Regency, Lexington, KY

22-24 Southern Medical Association, Medical Staff Leadership Seminar, Hilton Head, South Carolina

28-30 San Diego Cardiac Center, Three-day Seminar, "Advanced Cardiac Imaging," Sheraton-Harbor Island Hotel, San Diego, CA

MAY

6-8 Southern Medical Association, Regional Postgraduate Conference, Lexington, KY

19-21 American Cancer Society, National Conference-Breast Cancer-1983, Boston Sheraton Hotel, Boston, Mass.

19 Allergy & Immunology, Seelbach Hotel, Louisville

20-21 Vitrectomy Workshop, Health Sciences Center, University of Louisville

22-27 14th Family Medicine Review—Session II, Hyatt Regency Hotel, Lexington

26-28 Adolescent Gynecology, Seelbach Hotel, Louisville

JUNE

2-3 Genetic Aspects of Common Genetic and Malformation Disorders, Hyatt Regency Hotel, Lexington

2-4 1st Symposium on Behavioral Neurology: Higher Cortical Functions and the Brain, Vanderbilt University School of Medicine, Nashville, TN

8-10 12th Update in OB-GYN, Hyatt Regency Hotel, Lexington

8-10 Eighth Annual Conference on Clinical Application of Hyperbaric Oxygen, Memorial Hospital Medical Center, Center for Health education, Long Beach, California

9-10 Southern Medical Association, Medical Malpractice Seminar, Houston, Texas

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19-20 Long Island Jewish-Hillside Medical Center, VASCULAR SURGERY 1983, Current Status of the Art (International Vascular Symposium), The New York Hilton at Rockefeller Center, New York, NY

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5-6 Bethesda Hospital and Deaconess Association, Second Annual Hands-On Anterior/Posterior Vitrectomy Workshop, The Terrace Hilton Hotel, Cincinnati, OH

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26-28 Southern Medical Association, Medical Malpractice Seminar, Hot Springs, Virginia

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7-10 13th Annual Peripheral Vascular Disease Symposium, University Hilton Inn, Columbus, OH

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13-14 Southern Medical Association, Medical Malpractice Seminar, Washington, D.C.

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4-5 Bethesda Hospital and Deaconess Association, Cincinnati Cancer Conference: G. I. Malignancies, The Westin Hotel, Cincinnati, OH

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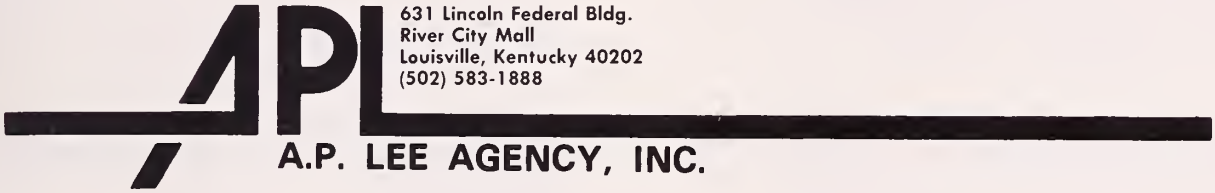
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PRESIDENT'S PAGE



A MAJOR concern of all physicians is the *Courier-Journal* and *Louisville Times* attack upon the Board of Medical Licensure and the peer review mechanisms of KMA. Numerous front page, sensationalized articles have focused upon a small number of physicians and attempted, through innuendo and slanted reporting to paint the entire profession with a broad brush. The Board of Medical Licensure has responded in a positive manner and blunted much of the criticism. Although concerns exist that licensure could become over zealous. I have great faith in the members of the board who have been subjected to tremendous pressure and constant attacks upon their credibility. KMA members should be cautious and ride out these difficult times and avoid over-reacting to the media critics.

A second major concern is the ever present upward spiral of health care costs that continues to arouse public interest. As physicians, we are aware of the problems and recognize the underlying basis for some of the dramatic increases. Unbelievable technology in the area of medical care creates its own obsolescence. Almost as soon as new equipment is purchased, a better "mousetrap" is produced. Any decision to slow this process or to deter continuing medical advances in such areas as neonatal centers, open heart surgery, implant and transplant surgery, are legitimate social and moral questions for society to debate.

We must serve our patients as educators as well as physicians. Patient awareness has been a central theme during my year as President of KMA. We must also increase our dialogue with business and recognize the difficulties industry has in maintaining benefits for their employees. Scapegoating and burying our heads in the sand will serve no purpose as we seek to extricate this country from a serious national problem. A third thing we must do is cement relations with other health care providers, particularly hospitals and nursing homes. Time is no longer on our side and our survival depends upon a joint coalition effort to tell "our story" to the patients and families we serve.

Finally, and most important, may I say that in these difficult times, when many of our patients are unemployed, we must moderate our fee increases and be more than willing to work with families in settling overdue accounts. **More importantly,** we must assure our patients that necessary medical care for them and their families will not be denied and will be available despite their plight and inability to pay. This is a tragic period for many of our patients and medicine should do its utmost to preserve what little dignity the unemployed still retain. Through a deep personal and professional interest in our patients and their family's health and welfare, medicine can survive and build upon the goodwill and service it provides in difficult times like these.

Medicine stands at the crossroads, facing many unknowns. For over 150 years, we have maintained the public trust and the respect of even our strongest adversaries. It has been accomplished by a tenacious group of physicians and a generous supporting public who maintained an abiding faith in the greatest health care industry ever devised. However, the delivery of health care is a fragile and complicated system in a rapidly changing world, bulwarked by an invisible and intangible supporting mechanism based on trust and mutual concern. Its cornerstone rests upon the same premise that serves every facet of our complicated economic structure; . . . every individual is guaranteed the freedom to choose, and the freedom to serve. The ultimate survival of our profession and its ability to endure and serve succeeding generations is a responsibility each of us must continue to share.

Dwight L. Blackburn, M.D.
President KMA

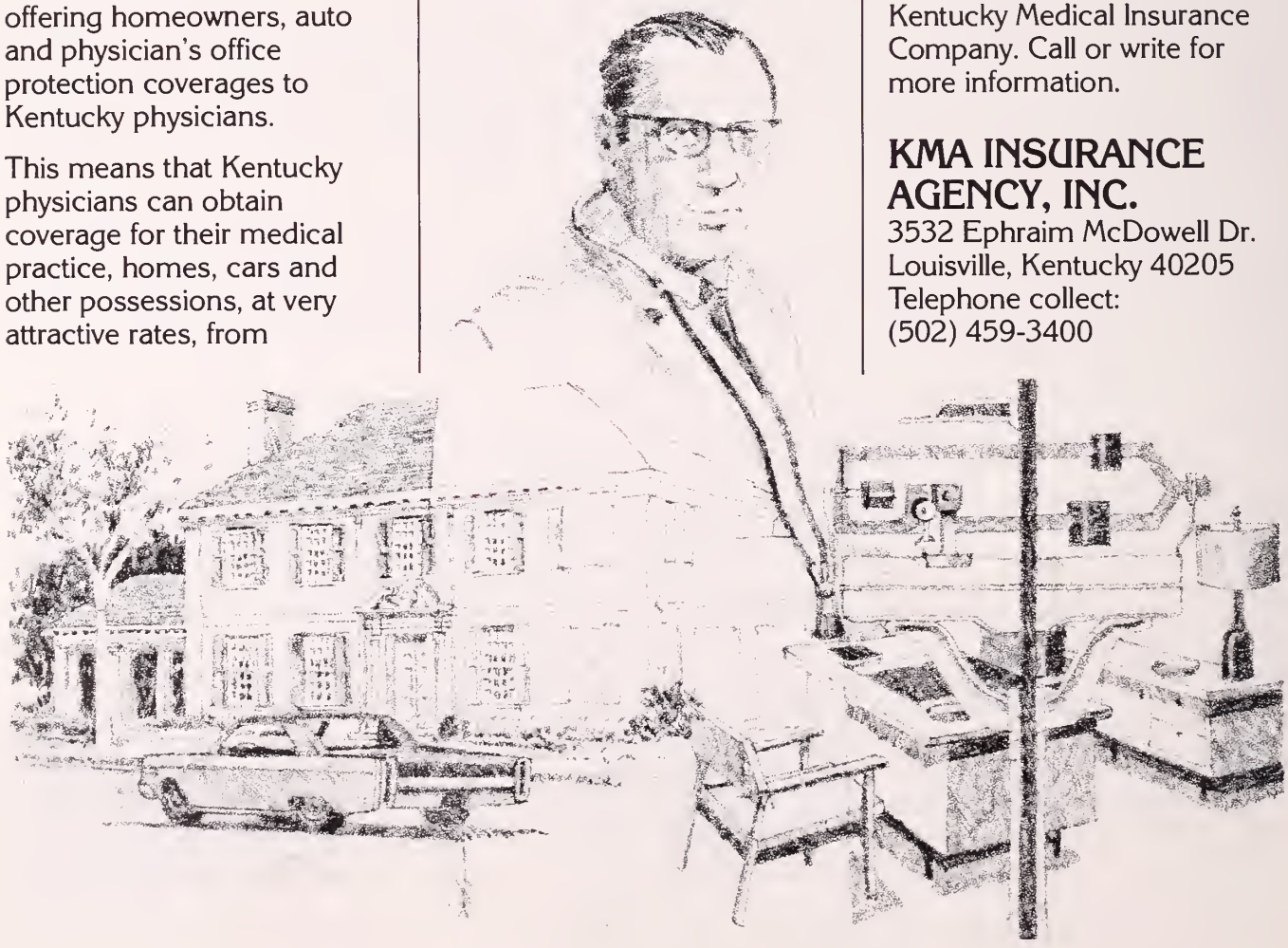
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The Journal Of The Kentucky Medical Association

April 1983 Volume 81 Number 4

SCIENTIFIC

Aminoglutethimide and Dexamethasone Therapy (Medical Adrenalectomy) for Metastatic Breast Carcinoma

STANLEY LOWENBRAUN, M.D., F.A.C.P. AND DELORES CUNITZ, R.N.

Eighteen postmenopausal patients with metastatic breast carcinoma were treated with aminoglutethimide and dexamethasone (medical adrenalectomy) with minimum follow-up duration of two years. Ten patients had one site of metastatic disease each, and the other eight had two sites each; bone was the most common metastatic site. Seven patients had previously received both hormonal therapy and chemotherapy, eight hormonal therapy alone, and two chemotherapy alone. Aminoglutethimide produced partial remissions in 13 patients and stabilization of disease in an additional four. Four of the 13 patients with partial remissions are continuing in response at 30, 34, 35, and 46 months from the start of therapy. The median duration of partial response is 12 months. The 11 patients who had responded to prior hormonal therapy all responded or remained stable upon subsequent aminoglutethimide therapy. The regimen was well tolerated, with lethargy, rash, and weight gain the only noted adverse effects. Aminoglutethimide is thus an important therapeutic modality for metastatic breast carcinoma especially in those patients known to have metastatic disease responsive to prior hormonal therapy.

SURGICAL adrenalectomy has been an historically accepted therapeutic approach in metastatic breast carcinoma, with an overall objective response rate of about 40%.[1] Disenchantment with this procedure has obviously rested with possible operative morbidity combined with inability to guarantee therapeutic benefit.

Aminoglutethimide (AMG), a derivative of the hypnotic, glutethimide, was used in the late 1950's as an anticonvulsant. Adrenal insufficiency, however, became recognized as a complication of its use,[2] and the drug was withdrawn from the market. Cash *et al*, investigating this toxicity in 1967,[3] found that AMG blocked conversion of cholesterol to pregnenolone, the first step in adrenal synthesis of estrogens, testosterone, cortisol, and aldosterone. In the same paper, a patient with metastatic breast carcinoma was reported to have achieved pain relief from AMG. Griffiths *et al* then described responses in three of nine patients with metastatic breast carcinoma, as measured by objective criteria.[4] Santen *et al* found that dexamethasone, by suppressing ACTH production when used with AMG, would prevent a feedback increase of ACTH from overriding the adrenal blockade.[5] With further studies, it became increasingly apparent that AMG with dexamethasone or hydrocortisone offered an effective "medical adrenalectomy" in patients with metastatic breast carcinoma.[6-10] In addition to inhibiting adrenal gland estrogen production, the drug was found to inhibit extraglandular aromatization of androstenedione to estrone.[11]

This report provides further documentation of the efficacy of AMG in patients with metastatic breast carcinoma who

Reprint requests: Stanley Lowenbraun, M.D., FACP, Suite 802, 250 East Liberty St., Louisville, KY 40202

have, in general, the favorable prognostic variable of responsiveness to prior hormonal procedures.

Materials and Methods

Eligibility Criteria

Postmenopausal patients with evaluable metastatic breast carcinoma and a definite demonstration of recent disease progression were eligible for the study. The study population included the following: (1) patients who had responded to one or more prior hormonal manipulations, regardless of the availability of results of estrogen receptor analysis, and (2) patients who had never had a hormonal manipulation or had failed to respond to one (but not more than one) prior hormonal manipulation, but were estrogen receptor-positive or indeterminant.

All patients had at least one lesion clearly measurable by physical examination, x-ray, or scan except those in whom bone lesions were the sole site of metastasis. Such patients were accepted as evaluable even though their lesions were not measurable and different criteria, as described below, were used for evaluation. Detection of lesions by bone scan alone was not accepted as evidence of metastasis; lesions had to be detectable by x-ray as well.

Patient Characteristics

Twenty patients were entered into the study from April, 1978 to December, 1979, two of whom were not evaluable because they became lost to follow-up within one month of starting AMG therapy. (They both had widely metastatic disease with performance status of 30 on the Karnofsky scale and complicating medical problems.) Although additional patients have been treated since December, 1979, it was elected not to include them in the current report so as to be able to report response duration and survival statistics with a potential of two year minimum duration.

Characteristics of the 18 evaluable patients are shown in Table 1. The median age is 60 years (46-75). All patients were postmenopausal—15 naturally, two as a result of surgery and one as a result of radiation therapy.

The median times from diagnosis of primary breast cancer and from first metastasis to initiation of AMG therapy were 65 months (24-151) and 22 months (2-144), respectively.

All evaluable patients but one had received prior therapy. Seven had received chemotherapy and hormonal therapy, eight hormonal therapy alone, and two chemotherapy alone. One hormonal approach had been used in six patients, two approaches in eight patients, and three approaches in one patient. Of the 14 patients treated with prior hormonal manipulation in whom there had been an objective parameter by which to judge response, 11 of the 14 patients had responded to the procedure. (Criteria for response were the same as defined below for AMG response.) Of the eight patients treated with prior chemotherapy with evaluable disease at the time, five of the eight had been partial responders, and an additional two had been stable.

Estrogen receptor determinations were available for only three of the patients—in all three instances it was positive. (The low incidence of estrogen receptor determinations was due to the fact that all but one of the patients had mastectomies two or more years prior to entry on study. At that time, *ie*, prior to April, 1976, the test was not generally used in this community.)

Metastatic sites are listed in Table 1. Ten patients had one site of involvement each, and eight patients had two sites each. Bone was the most common site of disease, with involvement in 14 patients; it was the sole metastatic site in six patients, and the sole evaluable site in eight patients. (In two patients (Table 1—patients 4 and 14) the lung was involved in addition to bone, but was not evaluable because of prior radiotherapy to it in one patient and nonmeasurable disease in the other). In all 14 patients with bone involvement, lesions were primarily lytic.

All forms of therapy were stopped at least four weeks before initiation of AMG therapy so that no possibility of hormone withdrawal response could occur. Performance status was judged by Karnofsky criteria.[12] Written informed consent was obtained from all patients prior to administration of AMG.

Treatment Regimen

AMG was given orally at a dose of 250 mg four times a day. Dexamethasone was given at a dose of 1.0 mg every morning. The dosage of dexamethasone was augmented by 1-mg increments (in divided daily doses) to a maximum dose of 3 mg if serial AM and PM plasma cortisol determinations revealed lack of adrenal-cortical suppression. If such suppression was still lacking, the AMG dose was increased.

Evaluation and Response Criteria

Pretreatment evaluation included a history, physical examination, complete blood count and platelet count, liver and renal function tests, AM and PM plasma cortisol determinations, chest x-ray, and other appropriate x-rays and scans. Re-evaluation at a minimum of every three months included all of the above. After initiation of therapy, the first re-evaluation was performed within four to six weeks.

For other than bone lesions, response was defined as: **complete remission**, 100% regression of lesions; **partial remission**, greater than 50% regression of measurable lesions (using the sum of the products of the diameter of all lesions); **stable**, lesions unchanged or decreased less than 50% in size for two months or longer; and **progression**, lesions increased in size or new lesions developed. In the case of bone metastases, the criteria used were: **partial remission**, greater than 50% improvement in the number and intensity of bone scan lesions, with no new areas of increased uptake, with bone x-rays in which lytic lesions appeared to be partially

Table 1. Characteristics of Postmenopausal* Patients

Patient No.	Age (yr)	Time (mo) before AMG: Primary Diagnosis	Time (mo) before AMG: First Metastasis	Estrogen Receptor Analysis	Prior Therapy: Hormonal: Type	Hormonal: Response	Hormonal: Duration of Response (mo)	Prior Therapy: Chemotherapy: Type	Chemotherapy: Response	Chemotherapy: Duration of Response (mo)	Karnofsky Performance Status	Sites of Metastasis	AMG Therapy: Response	AMG Therapy: Duration of** Response (mo)	Survival** (mo)
					Est	PR	12					chest wall			
1	60	33	33	ND	Test	PR	6	CMF(P)	PR	24	60	bone	PR	32	44
2	46	132	21	ND	Ooph	NE					70	pleura	PR	46+	47+
					Est	PR	8	CMF(P)	PR	9					
3	64	34	34	ND	Test	PR	7	Adria	PR	2	80	chest wall	PR	9	Unknown
					Est	PR	15					lungs			
4	57	84	18	ND	Tamox	S	3				50	bone	S	6	24
					Est	PR	16					bone			
5	67	84	28	ND	Test	PR	8				70	subcutaneous	PR	12	20
6	46	24	2	+				CMF	NE		60	bone	PR	11	35+
7	75	144	20	ND	Est	S	8				50	bone	S	5	7
8	50	48	10	ND							60	bone	PR	35+	36+
					Est	PR	31	CMF	PR	20	50	liver			
9	69	156	144	ND	Tamox	P						bone	PR	12	13
												lungs			
10	74	65	10	ND	Est	PR	7				60	bone	PR	34+	35+
					Est	PR	12					lungs			
11	62	50	38	ND	Tamox	S	6				40	bone	S	5	5
					Est	P									
12	67	104	52	ND	Test	PR	38				60	bone	PR	11	33
13	55	108	6	+	Est	S	3	CMF	S	6	40	bone	PR	7	9
					Tamox	P									
					Prog	P						lungs			
14	54	45	36	ND	Test	P		CMF	P		40	bone	P		2
15	71	46	40	ND				CMF	S	30	60	lungs	PR	30+	33+
16	56	66	24	ND	Test	P		CMF	PR	19	50	bone	PR	9	23
								Adria	P						
					Est	PR	45	CMF+				bone			
17	68	108	98	ND	Test	PR	38	Test	PR	30	60	liver	S	8	9
18	58	17	7	+	Tamox	P					70	chest wall	PR	4	26+

Abbreviations: AMG = aminoglutethimide; ND = not determined; NE = not evaluated; EST = estrogen; Test = testosterone; Ooph = oopherectomy; Tamox = tamoxifen; Prog = progesterone; PR = partial remission; S = stable; P = progression; CMF(P) = cyclophosphamide, methotrexate, and 5-fluorouracil (prednisone); Adria = adriamycin.

*Postmenopausal status occurred naturally in all patients except 2 and 15 (surgery) and 6 (radiation therapy).

**+ = still in response or still surviving

healed with no new lytic or blastic lesions demonstrable, and pain relief; **stable**, stable scan and x-ray appearance with pain relief, and **progression**, increase in size of lytic lesions or development of any new lesion on x-ray or scan. For inclusion in all categories, these changes had to last for at least three months.

Response duration was calculated from the start of response, and survival from initiation of therapy.

Cortisol Levels

Plasma cortisol levels were measured by radioimmunoassay (Clinical Assays, Travenol). In this study, normal plasma cortisol between 8-10 AM was considered to be 7.0-25 ug/100 ml, complete adrenal suppression was < 7 ug/100 mg, partial suppression was 8-16 ug/100 ml, and lack of suppression was > 16 ug/100 ml.

Results

Therapeutic Response

AMG produced partial remission in 13 patients and stabilization of disease in an additional four patients. Four of the 13 with partial remissions are continuing in response to treatment at 30, 34, 35 and 46 months from the onset of response. Another of this group has been lost to follow-up and eight have relapsed. The median duration of partial remission is 12 months (range: four-49 months). None of the four stable patients are still responding. The median duration of stable response is six months (five-eight). In one patient there was progression of disease, with development of brain metastasis (Table 1, patient 14) and AMG therapy was discontinued after one month. No patient experienced complete remission.

Survival

One patient (Table 1, patient 3) with partial remission was lost to followup after nine months of response with no adverse experiences; it has not been possible to determine if this patient is still living.

Six of the other 17 patients are still surviving, all of them having been partial responders. Of the 11 patients who died, five had had partial remissions, four were stable, and in one disease had progressed. All deaths but one were clearly related to disease progression. The exception was a patient (Table 1, patient 11) who had a history of diabetes, orthostatic hypotension, and severe bouts of nausea, vomiting, weakness, and dizziness before entry to the study. These bouts persisted

on AMG therapy, the AMG was discontinued, the dizziness continued, and the patient died one month later. The cause of death is uncertain, but felt to be unrelated to the drug. Median survival for the whole population is 24 months; the range of survival is two to 47+ months.

Prior Hormonal Therapy

The quality of response to the hormonal manipulation used immediately prior to AMG appears to correlate well with the quality of response to AMG. Three of the four patients who were stable on AMG therapy had been stable in response to their immediately preceding hormonal therapy. Of the nine with partial remission who had received prior hormonal therapy, five had had partial remissions in response to their most recent prior hormonal procedure. All 11 patients who had partial remissions or remained stable on at least one prior hormonal therapy had partial remissions or remained stable in response to subsequent AMG therapy. In one of the three patients whose disease never responded to prior hormonal therapy, the disease progression continued when the patient received AMG, whereas the other two patients had a partial remission with AMG. One of these latter two patients (Table 1, patient 16) had failed to respond to a clearly adequate trial of testosterone (Halotestin, 10 mg three times daily for two months), and the other patient (Table 1, patient 18) failed to respond to tamoxifen (Nolvadex, 20 mg twice daily for two months).

Tolerance

In general, AMG was very well tolerated. One patient had an erythematous, pruritic generalized eruption shortly after starting therapy. The rash disappeared upon discontinuation of the drug and did not reappear upon gradual administration of the drug again. One patient experienced severe transient lethargy, necessitating drug withdrawal for a few days. Mild transient lethargy was noted in five patients. Weight gain was a severe problem in one patient.

No blood count depression or liver or renal function deterioration was noted in any patient in this study.

Cortisol Levels

The effects of different daily doses of dexamethasone on adrenal suppression were determined by measurement of cortisol levels (Table 2).

In one patient, complete adrenal suppression was achieved with a dose of 2 mg of dexamethasone, with escape within two months necessitating dexamethasone dose increase. In all other patients, once complete suppression was achieved, it persisted for as long as treatment with AMG and dexamethasone was continued.

In two patients, the AMG dose was increased to 1.5 g daily because of incomplete suppression with 3 mg of dexamethasone. This increased dose of AMG resulted in complete suppression without side effects in both patients. In only two patients even partial suppression was never achieved. In one of these patients (Table 1, patient 14) disease progressed in one month and the patient was withdrawn from the study. The other patient (Table 1, patient 5) had a partial remission lasting one year.

Table 2. Effect of Dexamethasone on Adrenal Suppression

Dexamethasone (mg/day)	No. Patients	Adrenal Suppression (Cortisol Level) Complete (<7 μg/100 ml)	Partial (7-17 μg/100 ml)	None (>17 μg/100 ml)
1	14	1	4	9
2	12	5	3	4
3	8	6	1	1

Discussion

The rates of response to AMG reported in the medical literature [4,6-10,13] are in the range of 45% to 68% for partial remission or stabilization of disease and 37% to 50% for partial remission alone (Table 3). In our study 95% of the patients showed partial remission or stabilization of disease, and 72% partial remission alone.

Factors in our study, such as age, menopausal status, disease-free interval, and sites of metastases, appear to be similar to those reported previously [4,6-10,13] and do not, therefore, appear to explain the higher response rate. Nor do differences in the overall response criteria. However, evaluation of response in regard to bone lesions did vary significantly, and since bone was the most common site of metastasis in our study, as well as the previously reported studies, [6,8-10,13] these evaluation criteria become extremely important.

Our evaluations included bone-scan results. The validity of bone scanning in evaluating response has been recently well-documented.[14] In our study, all scans were performed with a uniform technique at the same institution, lending validity to comparison of pretreatment and post-treatment films. Since bone scans are a relatively sensitive test, remissions judged by scans in our study might not have qualified as such by the definitions used in other studies. This seems unlikely, however, since our definition for partial remission of bone lesions also required supportive evidence of improvement on x-rays, as well as relief from pain. Moreover, in only five of the 13 patients with partial remissions was bone the sole site of evaluable disease. In addition, the fact that the median duration of partial remission for patients with bone lesions as the sole evaluable site was similar to that for patients with lesions in other sites as well further substantiates the validity of bone scans as evaluation criteria. If patients with bone as the sole evaluable site are excluded from the study, the response rate does not change. Therefore, the use of bone scan improvement as a criterion of response

Table 3. Results with Aminoglutethimide Therapy in Metastatic Breast Carcinoma Reported in the Literature

Reference Number	Patients Entered (N)	Evaluable Patients (N)	Stable (N)	Responses* PR (N)	PR (%)	S + PR (%)
4	9	9	2	3	33	55
6	21	21		10	48	48
7	24	18		9	50	50
8	42	40	4	15	39	50
9	29	22	4	11	50	68
10	50	49	10	19	39	58
13+	147	129	10	48	37	45
Present Study	20	18	4	13	72	95

*S = Stable, PR = Partial Remission or Complete Remission + Includes cases previously reported in references 6 & 10

does not appear to account for the comparatively high response rate in our population.

The major difference between the population in our study and those in the previously reported ones appears to be a greater number of responders to prior endocrine manipulation. Eleven of our 18 patients (61%) were definite responders (partial remission or stable) to prior hormonal therapy. In contrast, in four previous investigations in which prior hormonal response is documented,[4,5,8,10] only 25 of the 120 patients treated (21%) had responded to it. Furthermore, in Santen's recent report[13] of 26 patients previously responsive to hormonal therapy (androgens, hypophysectomy, adrenalectomy and oophorectomy) 16 (62%) responded to subsequent AMG. The latter response rate approaches our 72% response rate, confirming the probability that prior response to hormonal therapy is the most important prognostic variable with regard to predicting response to AMG.

Thus, the present study shows that AMG plus dexamethasone is a highly effective treatment approach in postmenopausal breast carcinoma if the patient selection criteria includes prior hormonal responsiveness. It seems highly likely that estrogen receptor positivity would also accurately predict response to AMG. In our population, unfortunately, estrogen receptor analyses had not been performed in most of the cases for two reasons. First, mastectomies were carried out prior to the test's general availability and the recognition of its value in our community. Secondly, at the time of the patient's entry into our study, hormonal responsiveness in most of the patients had already been clinically proven. Furthermore, in most of the patients tissue for estrogen receptor analysis was inaccessible. Again, Santen's recent report[13] bears out the value of estrogen receptor positivity in predicting response to AMG.

The high response rate for AMG, with notable paucity of toxicity, would appear to render this drug therapy a more desirable one than hypophysectomy or surgical adrenalectomy. Medical adrenalectomy compared favorably to hypophysectomy in one reported prospective randomized trial.[6] One reported study showed AMG to be comparable to surgical adrenalectomy in rate and duration of response.[15] Therefore, this well-tolerated drug appears to be a reasonable alternative to major surgical ablation.

As described in this study, patients can "escape" from adrenal blockade. It has been found that dexamethasone's metabolism is accelerated by AMG. Therefore, we, as well as others,[13] currently recommend using hydrocortisone rather than dexamethasone to suppress the overriding effect of increasing levels of ACTH on adrenal blockade. Apparently, hydrocortisone metabolism is not accelerated by AMG.[16]

References 1. Fracchia AA, Randall HT, and Farrow JH: The results of adrenalectomy in advanced breast cancer in 500 consecutive patients. *Surg Gynecol Obstet* 125:747-756, 1967. 2. Camacho AM, Brough AJ, Cash R, and Wilroy RS: Adrenal toxicity associated with the administration of an anticonvulsant drug. *J Pediat* 68:852, 1966 (Abstract). 3. Cash R, Brough AJ, Cohen MNP, and Satoh PS. Aminoglutethimide (Elipten-Ciba) as an inhibitor of adrenal steroidogenesis: mechanism of action and therapeutic trial. *J Clin Endocrinol Metab* 27:1239-1248, 1967. 4. Griffiths CT, Hall TC, Saba Z, et al: Preliminary trial of aminoglutethimide in breast cancer. *Cancer* 32:31-37, 1973. 5. Santen RJ, Lipton A, and Kendall J: Successful medical adrenalectomy with aminoglutethimide—role of altered drug metabolism. *JAMA* 230:1661-1665, 1974. 6. Harvey HA, Santen RJ, Osterman J, et al: A comparative trial of transsphenoidal hypophysectomy and estrogen suppression with aminoglutethimide in advanced breast cancer. *Cancer* 43:2207-2214, 1979. 7. Newsome HH, Brown PW, Terz JJ, and Lawrence W Jr: Medical and surgical adrenalectomy in patients with advanced breast carcinoma. *Cancer* 39:542-546, 1977. 8. Smith IE, Fitzharris BM, McKinna JA et al: Aminoglutethimide in treatment of metastatic breast carcinoma. *Lancet* 1:646-649, 1978. 9. Troner MB and Savaraj N: Medical adrenalectomy with aminoglutethimide in metastatic breast cancer. *Proc Am Assoc Cancer Res and Am Soc Clin Oncol* 19:409, 1978 (Abstract). 10. Wells SA, Santen RJ, Lipton A, et al: Clinical studies in postmenopausal patients with metastatic breast carcinoma. *Ann Surg* 187:475-484, 1978. 11. Santen RJ, Santner BD, Davis B, et al: Aminoglutethimide inhibits extraglandular estrogen production in postmenopausal women with breast carcinoma. *J Clin Endocrinol Metab* 47:1257-1265, 1978. 12. Karnofsky DA: Meaningful clinical classification of therapeutic response to anti-cancer drugs, Editorial. *Clin Pharmacol Ther* 2:709-712, 1961. 13. Santen SR, Wargul TJ, Lipton A, et al: Aminoglutethimide in treatment of postmenopausal women with advanced breast carcinoma. *Annals Int Med* 96:94-101, 1982. 14. Citrin DL, Hougen C, Zweibel W, et al: The use of serial bone scans in assessing response of bone metastasis to systemic treatment. *Cancer* 47:680-685, 1981. 15. Santen RJ, Worgul T, Veldhuis J, et al: Randomized, controlled trial of medical adrenalectomy with aminoglutethimide and surgical adrenalectomy. *N Engl J Med* 305:503-512, 1981. 16. Santen RJ, Wells BA, Rumic S, et al: Adrenal suppression with aminoglutethimide. *J Clin Endo Metab* 45:469-479, 1977.

A New Systolic Murmur in Acute Myocardial Infarction

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CARDIOGENIC shock has replaced arrhythmias as the main cause of death from acute myocardial infarction. The underlying pathophysiological derangement in a majority of these cases is the loss of a large amount of myocardium leading to pump failure. However, in a significant number of fatal cases the mechanism of shock is either ventricular septal rupture, or papillary muscle rupture. These entities almost always produce new systolic murmurs. A systolic murmur, however, is a common finding in acute myocardial infarction. It is most commonly produced by papillary muscle dysfunction due to ischemia of the papillary muscle, or to spatial papillary muscle dysfunction due to left ventricular dilatation. Thus, the distinction between a hemodynamically significant, and a hemodynamically insignificant murmur becomes imperative for the proper management of these patients. The purpose of this paper is to discuss the significance of a new systolic murmur in the setting of an acute myocardial infarction, utilizing the case history of a recent patient.

Case Report

A 71-year-old white male with several years history of stable angina pectoris, hypertension and smoking was admitted on 3/23/81 to a local hospital in Indiana complaining of prolonged chest pain. Cardiac enzymes and electrocardiograms indicated an acute anterior myocardial infarction. His initial course was uneventful with a normal SMA 18, and a normal chest x-ray. There was no clinical evidence of congestive heart failure.

On admission a crescendo-decrescendo, grade 2/6, ejection systolic murmur was heard at the cardiac base. Next day he had a few episodes of atrial fibrillation which reverted back to normal sinus rhythm with digoxin therapy.

A different systolic murmur was heard on 3/25/81. It was of a grade 3/6 intensity, and was harsh and holosystolic. The murmur was equally heard at the apex and along the left parasternal area, and radiated to the axilla. In the ensuing week the patient developed congestive heart failure which became progressively worse in spite of medical therapy. His blood urea nitrogen increased to 81 mg/DL. His chest x-ray revealed progressive cardiomegaly and increasing congestive heart failure. The patient was mildly dyspenic at rest, but became severely dyspenic even with mild exertion.

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On 4/7/81, the patient was transferred to Norton Hospital for further care. On admission, the patient was mildly dyspenic at rest. His jugular veins were distended up to the angle of the jaw in the semi-recumbent position. He had bilateral basilar rales. His heart showed a visible and palpable PMI in the fifth intercostal space slightly outside the midclavicular line. The first heart was slightly decreased, the second heart sound was normal, and an S-3 was heard. The above pansystolic murmur was audible also at the apex and along the left parasternal area. Some radiation was present to the axilla. An ejection systolic murmur was also heard at the base. A two-component loud pericardial fiction rub was heard in the center of the precardium. A chest x-ray showed cardiomegaly and signs of pulmonary edema, which progressed over the next few days (Figure 1). The electrocardiograms showed evidence of acute anterior myocardial infarction and possibly previous inferior myocardial infarction (Figure 2). The admission laboratory data showed the creatinine to be 3.6 mg/DL, blood urea 104 mg/DL, potassium 5.9 mg/DL, sodium 126 mg/DL and bilirubin 0.7 mg/DL. Echocardiograms, M-mode and two-dimensional, showed mild pericardial effusion. There was no evidence of ventricular septal defect, and the mitral valve leaflets appeared normal.

Initially, the impression was that the basic problem was pump failure, and the murmur was most likely due to mitral regurgitation based on papillary muscle dysfunction produced by a dilated left ventricle. The patient was treated with digoxin and diuretics. A multigated radionuclide blood-pool angiogram demonstrated a large anterior apical aneurysm with the remaining myocardium contracting normally. No intra-cardiac shunt was appreciated. A Swan-Ganz catheter was inserted on 4/9/81 and showed the right atrial mean pressure to be 14 mmHg, right ventricular pressure 75/1 mmHg, pulmonary artery pressures 74/18 mmHg, and pulmonary capillary wedge pressure 27 mmHg mean, indicating severe elevation in all of these pressures (Table I). Because of the deteriorating renal function, peritoneal dialysis was started on 4/10/81. In spite of this his general condition deteriorated. A right and left heart catheterization was performed on 4/14/81 with the purpose of elucidating the underlying anatomy with the hope that surgical correction could be performed. Analysis of blood samples taken from right heart chambers showed a left-to-right shunt at the ventricular level of a significant magnitude; pulmonary flow to systemic flow ratio being 3.6:1. A left ventricular

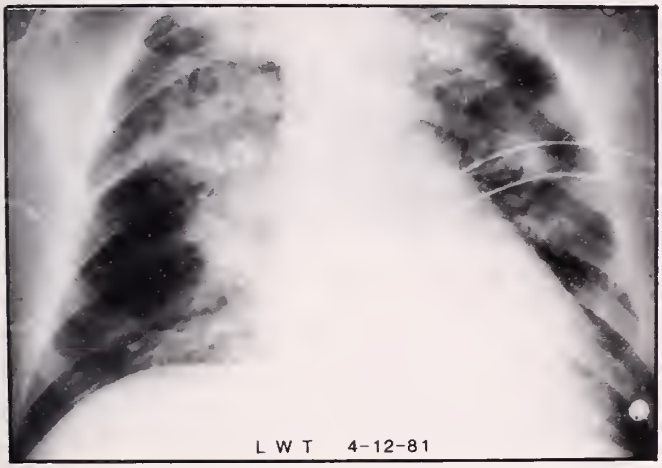


FIG. 1: A chest x-ray from the initial portion of the patients hospitalization at Norton Infirmary showing pulmonary edema, indicated by cardiomegaly, apical venous distension and hilar opacities.

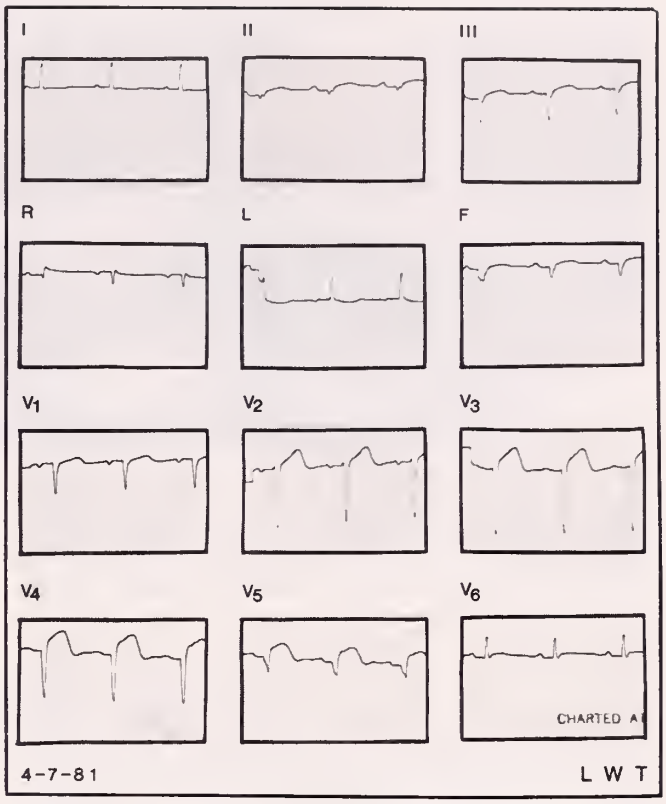


FIG. 2: An electrocardiogram showing acute anterior and possibly old inferior myocardial infarction as indicated by Q waves in leads II, III and aVF, and V_3 to V_5, and an ST segment deviation in leads II, III, and aVF and V_2—V_5.

angiogram showed a large aneurysm at the apex and transfer of renografin from the left ventricle into the right ventricle through a ventricular septal defect. A mild amount of mitral regurgitation was also seen. The remaining portion of the left ventricle contracted quite vigorously (Figure 3). Coronary arteriography demonstrated total occlusion of the mid portion of the left anterior descending coronary artery. The remaining vessels were normal (Figure 4). The patient was taken to the operating room on the following day. A large ventricular septal defect located in the anterior portion of the septum was closed with a patch and the ventricular aneurysm was plicated. The patient did well from the cardiovascular point of view, in that his congestive heart failure cleared entirely (Figure 5). However, the renal and hepatic failure became worse. He developed peritonitis, therefore, peritoneal dialysis was replaced by hemodialysis on 4/16/81. On exploratory laparotomy a large cecal abcess was found which necessitated right hemicolectomy. Additionally, he developed a sternal abcess which was drained on 4/25/81. In spite of these complications his cardiovascular system continued to remain stable and he remained out of congestive heart failure. His renal and hepatic failure progressed. A blood culture grew bacteroides. The patient died of end-organ failure with the last serum creatine being 7.4 mg/DL and bilirubin 26.8 mg/DL, on the 40th day after the initial event.

Discussion

In as many as 55% of patients with acute myocardial infarction, a new systolic murmur associated with or without mitral regurgitation has been found.[3,4] However, in a great majority of this group the mitral regurgitation is not hemodynamically significant as judged by the absence of congestive heart failure and a stable clinical course.[3] On the other hand, determination of hemodynamic significance of a new systolic murmur in patients who have congestive heart failure or shock becomes mandatory. Such a murmur may indicate the acute development of ventricular septal rupture or papillary muscle rupture, two potentially serious but treatable complications of acute myocardial infarction. In other cases the murmur may be the result of papillary muscle dysfunction due to papillary muscle ischemia or necrosis, or spatial derangement of the papillary muscle and chordae tendineae system.

Papillary Muscle Rupture:[5-7] The autopsy incidence of this complication of acute myocardial infarction has ranged from 0.4% to 5%. Rupture of the postero-medial papillary muscle associated with inferior myocardial infarction is more frequent. Most of the reported cases are of rupture of one head of papillary muscle which supports two or three chorade tendineae, rather than a total rupture of a papillary muscle, since such an event is thought to be incompatible with life.

Clinical manifestations of papillary muscle rupture include: 1) sudden deterioration in the clinical state and development of congestive heart failure, generally on the third or fourth day after the initial event, 2) a new holosystolic, apical murmur radiating to the axilla and back, usually with-

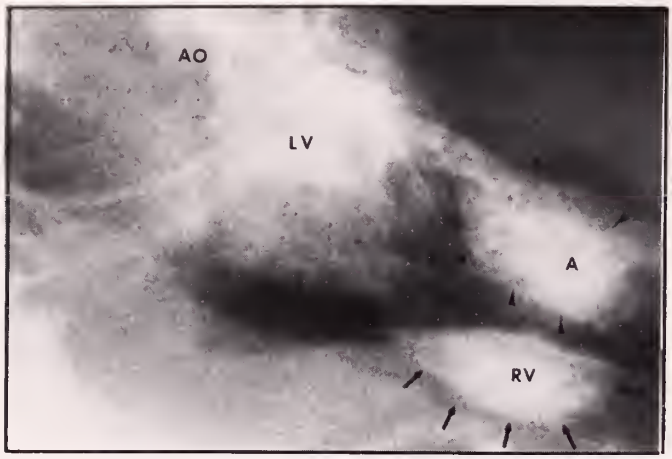


FIG. 3: A systolic frame from the left ventricular angiogram shows an aneurysm at the apex (A, arrows) of the left ventricle, and renografin entering the right ventricle through the ruptured septum (arrows). The base of the left ventricle was contracting normally. AO=Aorta, LV=Left Ventricle, RV=Right Ventricle, A=Aneurysm.

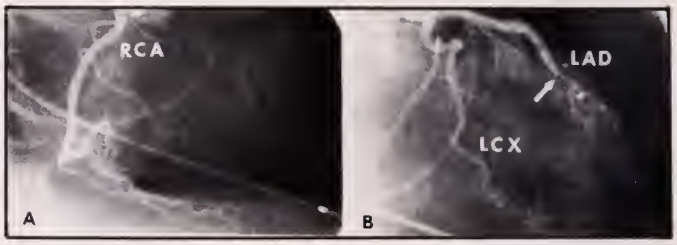


FIG. 4A: A frame from the right coronary arteriogram (RCA) showing this vessel to be normal FIG. 4B: A frame from the left coronary arteriogram. The circumflex branch (LCX) is normal, but the left anterior descending branch (LAD) is totally occluded in the middle (arrow). The distal portion of this vessel was not seen because of lack of filling either from the left or the right injection. The artery on the right margin of the heart shadow beyond the arrow is a small diagonal branch given off by the LAD prior to the point of occlusion.

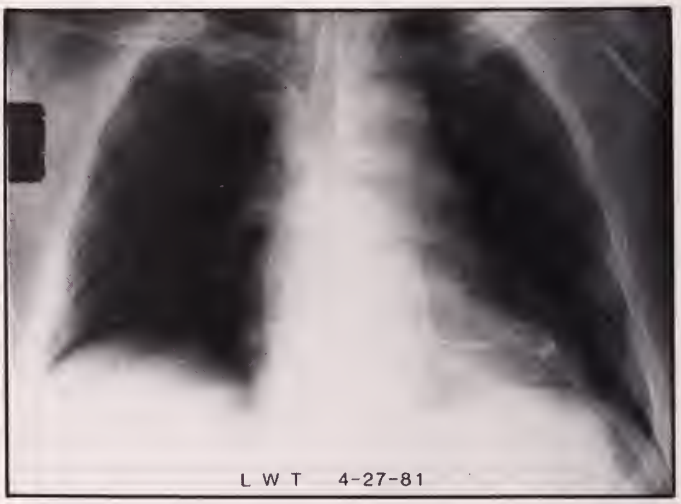


FIG. 5: A chest x-ray in the postoperative period indicating clearing of congestive heart failure.

out an associated thrill, and 3) electrocardiographic changes of acute myocardial infarction, predominantly the inferior type. It should be noted that myocardial infarction does not have to be transmural, as papillary muscle rupture is frequently found in non-transmural myocardial infarction. Average survival after papillary muscle rupture is three days, rarely patients surviving more than a month, especially when rupture is partial. One month mortality is as high as 90%. Therefore, early diagnosis is mandatory.

Presently, it is recommended that mitral valve replacement should be postponed for six to eight weeks if the hemodynamic state is stable, to allow healing of the necrosed myocardium. However, if the hemodynamic status continues to worsen as indicated by worsening congestive heart failure, in spite of maximum therapy then mitral valve replacement should be performed urgently.[8] The majority of these patients need concomitant aorto-coronary vein by-pass surgery.

Ventricular Septal Rupture:[9-12] This complication is found in 0.5 to 1% cases of myocardial infarction and occurs generally two to three days after the onset of the initial event. Therefore, the time course is approximately the same as of papillary muscle rupture. Similarly, the majority of cases are dead within a week, survival being rare after a month. Ventricular septal rupture always involves the muscular part of the ventricular septum and may consist of multiple perforations. In half the cases, an associated ventricular aneurysm is also present. It is more commonly associated with anterior myocardial infarction, and the electrocardiogram frequently shows right bundle branch block or other conduction abnormalities.[13] The systolic murmur is present along the left parasternal area and is accompanied by a thrill in approximately half the cases.

Papillary Muscle Dysfunction:[4,6] Transient or permanent systolic murmurs are quite common in acute myocardial infarction. Commonly they are due to papillary muscle dysfunction produced by ischemia, or necrosis, or spatial derangement of the papillary muscles due to left ventricular dilatation. When the damage to the papillary muscles from ischemia or necrosis is severe, it can produce significant mitral regurgitation. The murmur may be holosystolic but more often it occupies mid-to-late systole, is 3/6 or less in intensity and is diamond shaped, and it more often radiates toward the sternum rather than toward the axilla. The first heart sound is generally normal.

Frequently, middle aged and elderly patients have systolic murmurs at the cardiac base which are generally due to aortic valve sclerosis. But such a murmur may represent significant aortic stenosis. The aortic systolic murmurs have ejection quality and they are typically transmitted to the neck vessels. It should also be pointed out that frequently systolic murmurs of aortic origin are best heard at the cardiac apex. A delayed carotid upstroke time is a helpful sign of

TABLE I HEMODYNAMIC DATA

SITE	PRESSURE mmHg SYSTOLIC/DIASTOLIC (MEAN)				OXIMETERY			
					O_2 CONTENT VOLUMES %		O_2 SATURATION %	
	Maximum Normal		Patient		Maximum Normal Stepup	Patient's Actual Values	Maximum Normal Stepup	Patient's Actual Values
RA		(5)		(16)	SVC to RA 1.3	8.5	SVC to RA 7	64.0
RV	30/7		72/18		RA to RV 1.0	12.1	RA to RV 5	90.0
PA	30/13	(20)	72/22	(39)	RV to PA 1.0	11.5	RV to PA 5	86.0
LV	140/12		80/20					
AO	140/90	(105)	80/48	(60)		13.3		99.0

Ratio of Pulmonary-to Systemic Flow $= \frac{O_2 \text{ Content or Saturation (Systemic Artery-RA)}}{O_2 \text{ Content or Saturation (Systemic Artery-PA)}} = 3.6{:}1$

RA = Right Atrium, RV = Right Ventricle, PA = Pulmonary Artery
LV = Left Ventricle, AO = Aorta

significant aortic stenosis. A pericardial friction rub, especially with mainly the systolic component, may be confused with a systolic murmur.

Differential Diagnosis: A loud, holosystolic, low pitched apical murmur often without a thrill and radiating to the axilla associated with inferior myocardial infarction favors the diagnosis of papillary muscle rupture. Whereas, a harsh pansystolic murmur in the left parasternal area, accompanied by a thrill (in half the cases), not radiating to the axilla and associated with anterior infarction favors the diagnosis of ventricular septal rupture. However, such a distinction may not always be possible. Altered hemodynamics, for example, a dilated right ventricle in ventricular septal rupture and a dilated left ventricle may alter the characteristics and location of the murmur and thus may confuse the picture. The murmur of ventricular septal rupture is often present, or equally well heard at the apex. Similarly, the murmur of papillary muscle rupture may be transmitted toward the sternum. A chest x-ray in both the conditions shows a picture consistent with congestive heart failure.

A systolic murmur produced by papillary muscle dysfunction, whether or not hemodynamically significant, may be difficult to distinguish from the murmur produced by the above two entities.[4,8]

An echocardiogram, especially a two-dimensional study, may detect a prolapsing mitral valve cusp due to loss of support in papillary muscle rupture and may detect ventricular septal defect produced by ventricular septal rupture.[13-15] A multigated blood-pool scan will often be helpful in delineating the left ventricular function and may also detect left-to-right shunt in ventricular septal rupture.[16]

A bed-side right heart catheterization performed with the help of a balloon tipped flow directed (Swan-Ganz) catheter is essential for the management of these seriously ill patients.[17] This procedure will also make a definite distinction between papillary muscle rupture and ventricular septal rupture.[18] The picture can be clarified with the help of oxygen saturation of blood samples taken from the right atrium, right ventricle and pulmonary artery during the insertion of such a catheter, or simultaneously taken samples from the proximal and the distal ports where a double lumen catheter is used. A stepup of oxygen content between the right atrium and the pulmonary artery by greater than one volume indicates a significant left-to-right shunt at the ventricular level. A tall V wave in the pulmonary wedge pressure tracing favors papillary muscle rupture but such a finding can also be seen in ventricular septal rupture. A complete right and left heart catheterization may be needed to determine the functional status of the left ventricle, degree of mitral regurgitation and the status of the coronary arteries. This is always necessary, pre-operatively, if surgical intervention is decided upon.[6]

This case shows that clinical distinction between ventricular septal rupture and mitral regurgitation produced by papillary muscle rupture, or papillary muscle dysfunction is frequently difficult. This distinction can be made with certainty only with cardiac catheterization. Early mortality in ventricular septal rupture is high, but an occasional patient, as in this case, will survive for weeks. In spite of the unforunate outcome, this case demonstrates that early surgical correction of the defect is feasible and often is the only mode of therapy that may prove life saving.

References 1. Grossman W: Catheterization and Angiography. Philadelphia, Le and Febiger, 1980, p 131. 2. Yang SS, Bentivoglio LG, Maranhao V, Goldberg H: Cardiac Catheterization Data to Hemodynamic Paramenters. Philadelphia, FA Davis, 1978, p 209. 3. Heikkila J: Mitral incompetence as complication of acute myocardial infarction. Acta Med Scand 475 (Suppl):7, 1967. 4. Dugall JC, Pryor R, Blount SG: Systolic murmur following myocardial infarction. *Am Heart J* 87:577, 1974. 5. Morrow AG, Cohen LS, Roberts WC, Braunwald NS, Braunwald E: Severe mitral regurgitation following acute myocardial infarction and ruptured papillary muscle. Hemodynamic findings and results of operative treatment in four patients. *Circulation* 37 (Suppl II):124, 1968. 6. DeBusk RF, Harrison DE: The clinical spectrum of papillary muscle disease. *N Engl J Med* 281:1458, 1969. 7. Wei JY, Hutchins AM, Buckley BH: Papillary muscle rupture in acute myocardial infarction. *Ann Intern Med* 90:149, 1979. 8. Gold HK, Leinbach RC, Sanders CA, et al: Intra-aortic ballon pumping for ventricular septal defect or mitral regurgitation complicating acute myocardial infarction. *Circulation* 47:1191, 1973. 9. Selzer A, Gerlrode F, Kerth WJ: Clinical, hemodynamic, and surgical considerations of rupture of the ventricular septum after myocardial infarction. *Am Heart J* 78:598, 1969. 10. Vlodaver J, Edwards JE: Rupture of ventricular septum or papillary muscle complicating myocardial infarction. *Circulation* 55:815, 1977. 11. Hutchins GM: Rupture of the interventricular septum complicating myocardial infarction: Pathological analysis of 10 patients with clinical diagnosed perforation. *Am Heart J* 97:165, 1979. 12. Montoya A, McKeever L, Scanlon P, Sullivan JH, Gunnar RM, Pifarre R: Early repair of ventricular septal rupture after infarction. *Am J Cardiol* 45:345, 1980. 13. Chandraratna PAN, Balachandran PK, Shah PM, Hodges M: Echocardiographic observations on ventricular septal rupture complicating acute myocardial infarction. *Circulation* 51:506, 1975. 14. Meyer JF, et al: Systolic mitral flutter: An echocardiographic clue to the diagnosis of ruptured chordae tendineae. *Am Heart J* 93:3, 1977. 15. Stevenson JG, Kawabori I, Gunteroth WG: Differentiation of ventricular septal defects from mitral regurgitation by pulsed Doppler echocardiography. *Circulation* 56:14, 1977. 16. James TN: De Subitaneis Mortibus: XXIV. Ruptured interventricular septum and heart block. *Circulation* 55:934, 1977. 17. Swan HJC, Ganz W, Forrester J, et al. Catheterization of the heart in men with the use of a flow-directed balloon-tipped catheter. *N Engl J Med* 283:447, 1970. 18. Meister SG, Helfant RH: Rapid bedside differentiation of ruptured interventricular septum from acute mitral insufficiency. *N Engl J Med* 287:1024, 1972.

The 34th Annual Session of the Kentucky Surgical Society will be held on May 27-28, 1983, at the Lexington Marriott Resort, Griffin Gate, 1800 Newtown Pike, Lexington, Kentucky 40511. The guest speaker will be G. Tom Shires, M.D., Professor and Chairman of the Department of Surgery at the Cornell University Medical College in New York and Surgeon and Chief, New York Hospital. On Friday, the 27th of May, at the morning session, Dr. Shires will speak on "Current Shock Management." On Saturday, the 28th of May, at the morning session, Dr. Shires will speak on "Management of Difficult Abdominal Injuries."

Glossopharyngeal Neuralgia With Syncope

THOMAS M. MARSHALL, M.D.

A case of Glossopharyngeal neuralgia with syncope has been reported and the various theories as to the etiology have been discussed. The patient had excellent results from surgical division of the ninth as well as the upper rootlets of the tenth cranial nerves.

GLOSSOPHARYNGEAL neuralgia is a rare disease, and when associated with syncope is even more rare. This case is being reported to call attention to the importance of recognizing this combination for therapeutic reasons.

Case Report

A 65-year-old man was seen in July of 1981 with a four year history of repeated attacks of a stabbing, lancinating pain in the left side of his neck and in the region of his left tonsil. These attacks were triggered by swallowing cold water, chewing, or even talking. He had brief periods in which he was free of the pain, but recently the attacks had increased in severity and in number. He had seen several physicians and had taken a variety of medications for relief. He had been started on a small amount of Tegretol and this was increased until he was relatively free of pain. He was also on Catapres for hypertension. Although the Tegretol was initially beneficial, he developed a rash and epigastric distress in October and stopped the medication. On several occasions thereafter he had severe episodes of pain associated with difficulty in breathing, a tight sensation in his throat, profuse sweating, and mild syncope. His wife found his blood pressure to be 90/50 during one of these attacks, and on recovery from the pain his pressure rose to 190/110. Because of his continuing episodes of pain and an intolerance of a therapeutic level of Tegretol, surgery was planned, after study. However, on November 15th of 1981, he was admitted to Methodist Evangelical Hospital as an emergency because his wife was unable to obtain a blood pressure or pulse during an episode of pain and syncope.

Following admission, telemetry demonstrated a marked bradycardia and sinus arrest with each episode of pain. The cardiologist thought he was having periods of sinus arrest and hypotensive episodes. Tegretol tid was re-started along with Atropine qid and his pain beame less severe and there was no further sinus arrest or syncope. A CT brain scan, skull x-rays, and routine laboratory studies were all normal. The episodes of pain continued, although less frequently. Since he was fearful of continuing the Tegretol because of his previous bad experience with the medication, surgery was elected. He was transferred to Baptist East Hospital where a left suboccipital craniectomy was performed on 11/25/81. Using the binocular microscope and microinstruments, the ninth and 10th nerves were found to be compressed by the left vertebral artery. The artery was only partially separated from the nerves because of a thick band of arachnoid tissue and at the time further attempts to decompress the nerves seemed to be too hazardous. The glossopharyngeal nerve and three upper rootlets of the vagus nerve were sectioned. The pulse slowed to 40 during the manipulation of the nerves but the blood pressure remained stable.

Post-operatively he experienced complete relief from the pain and attempts to reproduce it by stimulating the tonsillar fossa were unsuccessful. There has not been any further syncope. There is an area of decreased sensation over the left anterior and posterior tonsillar pillars and left half of the soft palate.

Discussion

The combination of glossopharyngeal neurlagia in association with syncopal episodes has been reported previously, approximately 30 times.[1] In 1969, White and Sweet[2] proposed that the term "vagoglossopharyngeal neuralgia" be used to describe this condition. The usual mechanism proposed has been spillover of impulses from the glossopharyngeal nerve via the tractus solitarius to the dorsal motor nucleus of the vagus nerve, resulting in reflex bradycardia or asystole.[1] It has also been suggested that an artificial synapse develops in the more proximal portion of the glossopharyngeal nerve so that fibers in the sinus nerve of Hering are stimulated by impulses of glossopharyngeal somatic sensory and motor nerves.[3] Dykman, *et al*,[4] in their studies of plasma catecholamines during a hypotensive episode associated with glossopharyngeal neuralgia, suggest that there is a suppression of adrenergic vasoconstriction contributing to the hypotension. Since afferent pathways from the carotid sinuses are carried in the glossopharyngeal nerve and abberent impulses

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originating in the glossopharyngeal nerve associated with this neuralgia could produce inhibition.

The medical management of glosspharyngeal neuralgia with syncope was reviewed in 1977[5] and subsequent reports emphasize the successful use of Tegretol with the addition of Atropine therapy and even a temporary cardiac pacemaker, in those cases in which surgery was not desirable for various reasons.[4]

Dandy[6] was the first to report that the pain of glossopharyngeal and vagal neuralgia persisted with the section of the glossopharyngeal nerve alone but it disappeared if the upper vagal roots were also cut. Several authors[7-8] have pointed out that when the stab of pain is felt beneath the angle of the jaw, upper cervical region, and deep in the external meatus of the ear, the pain is radiating into the vagal territory and a reflex inhibition of the heart may also be produced. Thus surgical division of the ninth and upper rootlets of the tenth cranial nerves has been the treatment recommended.

Glossopharyngeal and vagal neuralgia secondary to neurovascular compression of the 9th and 10th cranial nerves has been reported and microsurgical decompression of the nerves has provided relief from these symptoms.[9] Such compression may be one etiology of these parosysms of pain. The cross-compression may be by the posterior inferior cerebellar artery or the vertebral artery.[10]

A case of glossopharyngeal neuralgia associated with syncope has been presented and the importance of the recognition of this combination stressed.

References 1. Rushton JB, Stevens JC, Miller RH: Glossopharyngeal (vagoglossopharyngeal) neuralgia. *Arch Neurol* 1981; 38:201-205. 2. White JC, Sweet WH: Pain and the neurosurgeon: a 40-year experience. Springfield, ILL, Charles C Thomas Publisher, 1969, pp 265, 283. 3. Alpert JN, Armbrust CA, Akhavi M, et al: Glossopharyngeal neuralgia, asystole, and seizures. *Arch Neurol* 1977; 34:233-235. 4. Dykman TR, Montgomery EB, Gerstenberger PD, et al: Glossopharyngeal neuralgia with syncope secondary to tumor. *AM J Med* 1981; 71:165-168. 5. Taylor PH, Gray K, Bicknell PG, Rees JR: Glossopharyngeal neuralgia with syncope. *J Laryngol Otol* 1977; 91:859-868. 6. Dandy WE: Glossopharyngeal neuralgia (tic douloureux). It's diagnosis and treatment. *Arch Surg* 1927; 15:198-214. 7. Bohm E, Strang RR: Glossopharyngeal and vagal neuralgia. *Brain* 1962; 85:361-388. 8. Chawla J, Falconer MA: Glossopharyngeal and vagal neuralgia. *Br Med J* 1967; 3:529-531. 9. Morales F, Albert P, Alberca R. et al: Glossopharyngeal and vagal neuralgia secondary to vascular compression of the nerves. *Surg Neurol* 1977; 8:431-433. 10. Laha RK, Jannetta PJ: Glossopharyngeal neuralgia. *J Neurosurg* 1977; 47:316-320.

CONTINUING MEDICAL EDUCATION FOR DIABETES CARE

Louisville will host the ADA Course entitled *Problems in Diabetes: the challenging adolescent and the complicated adult* on Friday, April 29. This course will follow the day-long *Diabetes Update* course offered by University of Louisville Department of Endocrinology on April 28 and will be complimentary to it in content. Both will be held at Louisville Inn.

The ADA course will feature Dr. Fred Whitehouse from Henry Ford Hospital and University of Michigan. He is a past president of the ADA nationally. Other speakers include an expert in lasar treatment for retinopathy, Dr. John W. Gamel, and authorities on psychosocial aspects of diabetes care, Drs. Mike Stelling and Abe Fosson. In afternoon workshops, informal discussions on newer insulins, glucose control techniques, diet alternatives, and family interactions will be led by panels of physicians, nurses and dieticians from across the state.

The ADA and UL courses promise to be excellent CME experiences.

Contact the ADA Kentucky Affiliate, Inc., 682 Teton Trail, Frankfort, Ky. 40601. (502) 223-2971 about the *Problems in Diabetes* course April 29.

Contact the University of Louisville Department of Continuing Medical Education about the *Diabetes Update* course April 28. (Health Sciences Center, Louisville, Ky. 40202 (502) 588-5329)

Fulminant Hepatic Failure

JAHANGIR M. KHAN, M.D. and RICHARD A. WRIGHT, M.D

FULMINANT hepatic failure, or fulminant hepatitis, refers to acute massive destruction of the liver giving rise to the clinical picture of encephalopathy, hepatorenal syndrome and bleeding. The symptoms of fulminant hepatitis may be present from the beginning of the illness or develop during the course of what appears to be a typical viral hepatitis. The mortality rate is 70-95% in adults, slightly lower in children. A case is presented with a recent review of the literature as an update on the various aspects of fulminant hepatitis, including the various etiologies, pathogenesis, clinical manifestations and management.

Case Report

A 71-year-old white female was admitted with a two week history of vague abdominal discomfort and increasing abdominal girth. She was noted to be jaundiced by relatives. The patient had no known contact with hepatitis, history of previous hepatitis, blood transfusions or needle sticks, history of drug abuse or exposure to hepatotoxins.

A diagnostic and therapeutic paracentesis was performed with removal of one half liter. The fluid was a transudate with no evidence for malignancy or spontaneous bacterial peritonitis.

A liver scan showed decreased hepatocellular function. An ultrasound study revealed cholelithiasis, but no dilated intrahepatic ducts. Initial liver function tests showed: total bilirubin 13.3, SGOT greater than 900, SGPT 740, GGTP 138. Hepatitis A IgG and IgM antibodies were negative. Hepatitis B surface antibody was positive but core antibody and surface antigen were negative.

The patient's condition rapidly deteriorated with progression to coma. Serum ammonia rose to 116. (ULN=40) A repeat paracentesis revealed exudative peritoneal fluid with 21,700 WBCs (90% PMN) and total protein 2.3 gm/dl. The prothrobin time became abnormal despite intramuscular vitamin K. Subsequently, nasogastric suction revealed coffee ground material, and the stool became positive for blood. Supportive care including fresh frozen plasma, intravenous cimetidine, and lactulose enemas were administered. Moxalactam disodium was given intravenously. The patient's condition rapidly deteriorated despite supportive therapy with expiration 11 days post admission. Terminal events were thought to be progressive fulminant liver failure with encephalopathy, gastrointestinal bleeding and spontaneous bacterial peritonitis. A percutaneous liver biopsy done soon after her death showed massive collapse of the hepatocytes with degeneration and necrosis. (see photomicrograph)

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Etiology

Fulminant hepatitis may be caused by viruses, toxins or drugs. A viral etiology is the most common, accounting for 50-75% of the cases. Although an earlier report indicated that most cases were caused by Type A virus,[1] recent studies show that fulminant hepatitis is more commonly caused by Type B virus.[2] Mathiesen reported 22 patients with fulminant hepatitis: nine had Type B, four had Type A, and six had non A - non B. Two were thought to be drug induced. Psacharapoulos[3] reported 31 cases of fulminant hepatitis in children.[3] None were secondary to hepatitis B.[3]

Up to one third of cases of fulminant hepatitis are reported to be drug or toxin induced. Halothane is the major offender, acetaminophen a close second.[13, 32-35] Other common drugs and toxins inducing fulminant hepatitis induce isoniazid, alpha methyl dopa, azothiaprine, erythomycin estolate, rifampin, sodium valproate, tetracycline, vitamin A, carbon tetrachloride, arsenic, methoxyflurane, fluroxene, and mushroom (amanita phalloides).[4] Reye's syndrome accounts for a number of cases of fulminant liver failure in children. Fulminant hepatitis has also been reported recently with hydralazine[5] intake and enflurane anesthesia.[6]

In summary, the majority of cases of fulminant hepatitis are caused by viruses, but hepatotoxins and age must be taken into consideration for individual cases.

Pathogenesis and Clinical Manifestations

Many metabolic events occur with fulminant hepatic failure. Coagulation factors are depleted due to inadequate hepatic synthesis with subsequent hemorrhage in the gastrointestinal tract, brain and skin. Ingested nutrients are not metabolized and glucogenesis is impaired, causing lactic acidosis and hypoglycemia. Functional renal failure and acute tubular necrosis may occur. Glomerulonephritis, secondary to immune complex deposition from hepatitis B antigen-antibody interaction, has been described.[2,15,36] Proteinuria, red cell casts, and low urine sodium may be present. Bacterial endotoxemia causing renal vasoconstriction is thought to be an important mechanism of hepatorenal syndrome in fulminant hepatic failure, and is due to failure

of the Kupffer cells to filter the endotoxin absorbed from the gut.[15] A decrease in the peripheral vascular resistance is secondary to false neurotransmitters, yielding high cardiac output.[10] Hypoxia may occur from shunts in the pulmonary circuit, secondary to the effect of the vasoactive substances normally metabolized in the liver.[7] Central nervous system effects induce inappropriate ADH, which may potentiate development of pulmonary edema, (incidence as high as 37%). Pulmonary artery catheterization fails to document cardiac failure.[37] A central neurogenic defect is also proposed.[8]

Hepatic encephalopathy eventuates in coma, often precipitated by gastrointestinal bleeding with increased intestinal protein load. Increased absorption of ammonia from the intestine, renal failure with increased urea as a precursor of ammonia production, and infection with visceral protein catabolism contribute to the development of encephalopathy. Diuretics used inappropriately may cause hypovolemia, prerenal azotemia, and precipitation of further renal failure. Hypokalemia and alkalosis, secondary to diuretic therapy, increase renal vein ammonia. The inappropriate use of sedatives may depress the central nervous system directly, thus worsening encephalopathy. The depth of hepatic encephalopathy is the most reliable means for assessing and following the severity of hepatic failure.

Guidelines for grading encephalopathy

Grade	I:	Altered sleep habits, altered effect, reversal of day-night sleep pattern (Euphoria, belligerance).
Grade	II:	Drowsiness, but responsive to simple commands.
Grade	III:	Stupororous, response only to painful stimuli.
Grade	IV:	Unresponsive to painful stimuli. May have decerebrate or decorticate posturing and long tract signs.

The EEG, though not specific, is useful, and in the absence of other metabolic disease correlates well with the clinical grading.[39] Cardiac arrhythmias and hypotension occur commonly, and may be attributed partially to hypoxia, high output from peripheral vasodilatation, and accumulation of false neurotransmitters which may alter the conduction through the myocardium.[10] It is clear that the hypotension observed is not caused by catecholamine depletion, since patients with hepatic insufficiency respond to both norepinephrine and tyramine normally.[10]

Gastrointestinal bleeding is multifactorial, occurring in 25-50% of cases.[11-13] Stress ulceration of the stomach, compounded by the hypocoagulable state and hypoxia, contributes to the problem.

Another interesting finding is cerebral edema. In one series from England with 132 patients, 33% were noted to have cerebral edema at autopsy. In another study, 50% of patients dying from massive hepatic necrosis were found to have cerebral edema.[14] Whether these data indicate that a component of hepatic encephalopathy is due to a cellular defect with edema of the glial and nerve cells, or increased vascular permeability, is not known. About 10-20% of patients with massive edema die from uncal herniation. It is of importance to note that only 25% of all patients with acute hepatic insufficiency die of liver failure, the remainder succumbing from other complications.[14]

Management

All efforts should be made to maintain and support life, since the small percentage of patients who survive a bout of acute hepatic failure have an excellent outcome, with return of completely normal liver function, and no evidence of chronic liver disease or cirrhosis. Specific agents which actively inhibit liver damage from toxic substances (*eg* acetyl cystine in acetaminophen induced liver damage) are helpful.[40] Antiviral agents such as interferon and transfer factor have not been shown to increase survival once fulminant hepatic failure has developed.[11] If the etiology of the hepatic failure is unclear, and the coagulation profile is abnormal one can resort to transjugular biopsy.[24-26]

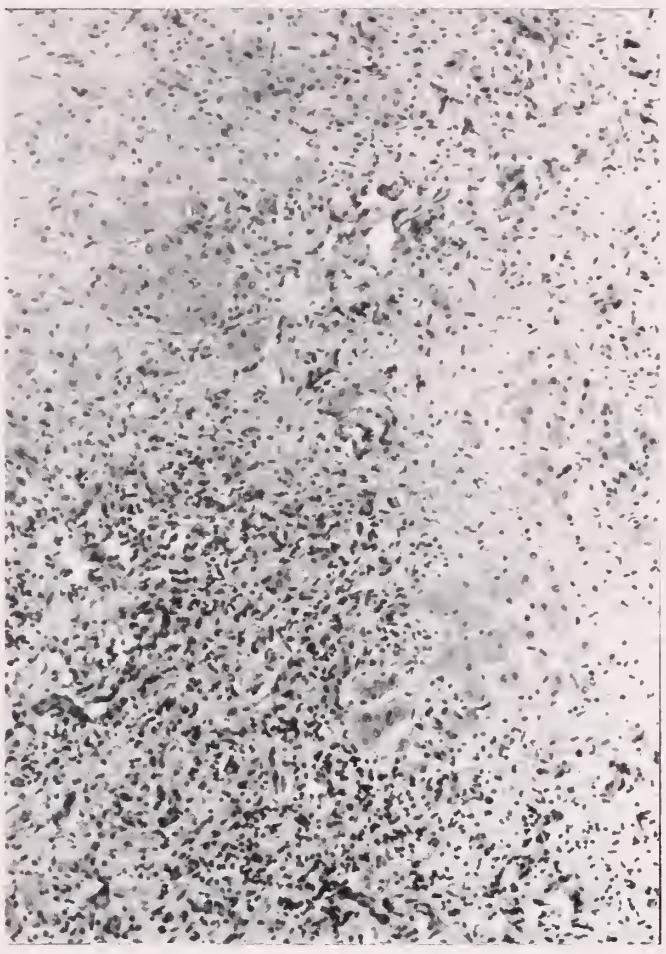
Hepatic transplantation, hemodialysis and peritoneal dialysis to remove unmetabolized toxins, charcoal hemoperfusion, exchange transfusion, plasmapheresis, hyperimmune hepatitis B globulin, and cross perfusion with primate liver preparations have universally met with failure.[17-23]

Three-fourths of the patients die of complications of hepatic failure, not from a direct result of liver necrosis. Massive gastrointestinal bleeding is a primary cause of death in up to 40% of the patients.[12] MacDougall showed that prophylactic use of H_2 receptor blockers reduced the incidence of G.I. bleeding to less than 4%.[12] Therefore, any patient with fulminant hepatic failure should be treated with cimetidine on a continuous basis. Consumptive coagulopathy, fibrinolysis, thrombocytopenia secondary to splenic sequestration, and increased capillary fragility contribute to bleeding.[27,28] Parenteral vitamin K is usually not helpful. Fresh frozen plasma and platelets may be given in acute bleeding situations.[29] Hypoglycemia should be treated with intravenous glucose as needed.[30] High output cardiac failure should be handled with appropriate pressor agents that increase peripheral vascular resistance. Norepinephrine seems to be an ideal agent, since response to this drug is normal in patients with fulminant hepatic failure. Hypoxia should be corrected with high concentrations of inspired oxygen, with or without positive end expiratory pressure. Since the degree of pulmonary shunting seems to be related to the decreased peripheral vascular resistance, norepinephrine is potentially of benefit. Intubation is often required to insure adequate oxygenation and pulmonary toilet in the obtunded patient.

The treatment of cerebral edema is controversial.[13] Ware and others have noted that there is no prevention or resolution of established cerebral edema using either corticosteroids or mannitol.[14] Cerebral edema occurring in the presence of a mass lesion is usually responsive to steroids. However, cerebral edema in fulminant hepatic failure is cytotoxic with the resultant diffuse swelling of both gray and white matter, and is unresponsive to either steroids or mannitol. Attempts to reduce hypoxia, a contributing factor in cerebral edema, should be made. If bleeding is a problem, fresh frozen plasma should be administered. Appropriate antibiotics should be given in case of sepsis. Care to avoid overhydration and depletion of the intravascular volume should be taken.

Evidence of renal dysfunction occurs in more than 70% of patients with fulminant hepatic failure.[36] Factors that can precipitate "Hepato-Renal Syndrome" include sudden diuresis with potent diuretics, massive paracentesis, gastrointestinal bleeding, and any other maneuvers leading to a sudden decrease in the effective intravascular volume. Unlike in acute tubular necrosis, the urine sodium rarely exceeds 10mEq. per liter.[15] Spontaneous bacterial peritonitis should be treated promptly with antibiotics. Parenteral nutrition with branched chain amino acid should be considered.[31]

The prognosis for fulminant hepatic failure is poor, with a 70-90% mortality. However, if recovery occurs, return to normal liver function and histology occurs frequently. Consequently, vigorous support efforts should be undertaken in every patient with this disease entity.



Photomicrograph showing massive acute hepatocellular injury inflammation, and bridging necrosis.

References 1. Rakela J, Mosley JW, Redeker AG: The role of hepatitis A virus in fulminant viral hepatitis (Abstract) *Gastroenterology* 69:A54/854, 1975. 2. Mathiesen LR, Skinoj P, et al: Hepatitis type A, B and non A - non B in fulminant hepatitis. *Gut* 21:72, 1980. 3. Psacharapoulos HT, Mowat AP, et al: Fulminant hepatic failure in childhood. *Arch Dis in Childhood* 55:252, 1980. 4. Rogers EL, Rogers MC: Fulminant hepatic failure and hepatic encephalopathy. *Pediatr Clin North Am* 27:701, 1980. 5. Bartoli E, Massarelli G, et al: Acute hepatitis with bridging necrosis due to hydralazine intake. *Arch Int Med* 139:698, 1979. 6. Danilewitz MD, Braude BM, et al: Acute hepatitis following enflurane anesthesia. *Br J Anesthesiology* 52:1151, 1980. 7. Trewby PN, Williams R, Reid L: Intrapulmonary vascular shunts in fulminant hepatic failure (Abstract). *Digestion* 14:466, 1976. 8. Spagnolo SV: Cyanosis of cirrhosis. *Med Clin North Am* 59:983, 1975. 9. Caronna JE, et al: The outcome of medical coma: Prediction by bedside assessment of physical signs. *Transactions AM Neurol Assoc* 100:25, 1975. 10. Trewby PN, Chase RA, et al: The role of false neurotransmitter octapamine in hypotension of fulminant hepatic failure. *Clin Sci Molecular Med* 52:305, 1977. 11. Iwarson S, Norkrans G, et al: Interferon treatment in acute hepatitis B infection with prolonged course. *Scand J Infect Dis* 12:233, 1980. 12. MacDougall BRD, Bailey RJ, et al: H_2 receptor antagonists and antacids in the prevention of acute gastrointestinal hemorrhage in fulminant hepatic failure. *Lancet* 1:617, 1977. 13. Gazzard BG, Portmann B, et al: Causes of death in fulminant hepatic failure and relationship to quantitative histologic assessment of parenchymal damage. *Quarterly J Med* 44:615, 1975. 14. Ware AJ, D'Angostino AN: Cerebral edema: A major complication of massive hepatic necrosis. *Gastroenterology* 61:877, 1971. 15. Wilkinson SP, Davies MH: Renal failure in otherwise uncomplicated acute viral hepatitis *Br Med J* 2:388, 1978. 16. Redecker AG: Fulminant hepatitis. Progress in Liver diseases. Vol IV. Grune and Stratton. New York pp 149-155, 1973. 17. Keynes WM, Chir M: Hemodialysis in the treatment of Liver failure. *Lancet* 2:1236, 1968. 18. Haapanen E, Tiula E: Plasma- Pheresis with Albumin as main substitute in Acute Hepatic coma. *Scand J Gastroenterology* 7:75-83, 1972. 19. Mosley JW: Treatment of fulminant Type B hepatitis with hepatitis B immune globulin: A cooperative study. *Gastroenterology* 66:A98/752, 1974. 20. Abouna GM, Kirkley JR, Hull CJ, Ashcroft T, Kerr DNS: Treatment of hepatic coma by extracorporeal pig liver perfusion. *Lancet* 1:64, 1969. 21. Buckner DC, Clift RA, Volwiler W, et al: Plasma exchange in patients with fulminant hepatic failure. *Arch Intern Med* 132:487, 1973. 22. Hollander D, Klebanoff G, Osteen RT: Human baboon cross circulation for treatment of hepatic coma. *JAMA* 218:67, 1971. 23. Abouna GM: Extracorporeal liver perfusion for hepatic coma (letter). *Lancet* 1:1185, 1971. 24. Hanafee W, Weiner M: Transjugular percutaneous cholangiography. *Radiology* 88:35, 1967. 25. Rosch J, Lakin RC, et al: Transjugular approach to liver biopsy and transhepatic cholangiograph. *New Engl J Med* 289:227, 1973. 26. Rosch J, Antonovic R, Dotter CT: Transjugular approach to the liver, biliary system and portal circulation. *Am J Roentogol* 125:602, 1975. 27. Clark R, et al: Coagulation abnormalities in acute liver failure, pathogenetic and therapeutic implications. *Scand J Gastroenterology* 8: (supp. 9) 63, 1973. 28. Rake MO et al: Intravascular coagulation in acute hepatic necrosis. *Lancet* 1:533, 1970. 29. Gazzard BG, et al: Coagulation factor concentrate in the treatment of the hemorrhagic diathesis of fulminant hepatic failure. *Gut* 15:993, 1974. 30. Samson RI: Fulminant hepatitis with recurrent hypoglycemia

and hemorrhage. *Gastroenterology* 53:291, 1967. **31.** Striebel JP, Holm E, Lutz H et al: Parenteral Nutrition and coma therapy with amino acids in hepatic failure. *J of Parent Enter Nutr* 3:240, 1979. **32.** Moult PJA and Sherlock S: Halothane related hepatitis. *Q J Med* 44:99, 1975. **33.** Trey C, Lipworth L, Chalmers TC et al: Fulminant Hepatic Failure Presumable contribution of halothane. *NEJM* 279:798, 1968. **34.** Clark R, Borirakchanyarat V et al: Hepatic damage and death from overdose of paracetamol. *Lancet* 1:66, 1973. **35.** McJurkin B, Barwick KW et al: Fatal massive necrosis following acetaminophen overdose. *JAMA* 236:1874, 1976. **36.** Wilkinson SP, Blendis LM, Williams R: Frequency and type of Renal and electrolyte disorders in Fulminant hepatic failure. *Br Med J* 1:186, 1974. **37.** Trewby PN, Warren R, Contini S, et al: Incidence and Pathophysiology of pulmonary edema in fulminant hepatic failure. *Gastroenterology* 74:859, 1978. **38.** Philips GB et al: The syndrome of impending hepatic coma in patients with cirrhosis of the liver given nitrogen substances. *NEJM* 247:239, 1952. **39.** Davidson CS and Gabudza G: Diseases of the Liver, J. B. Lippincot Co. Philadelphia p. 489, 1975. **40.** Mitchell JR, Potter WZ et al: Acetaminophen induced hepatic injury: Protective role of Glutathione in man and rationale for therapy. *Clin Pharmacol Ther* 16:676, 1974.

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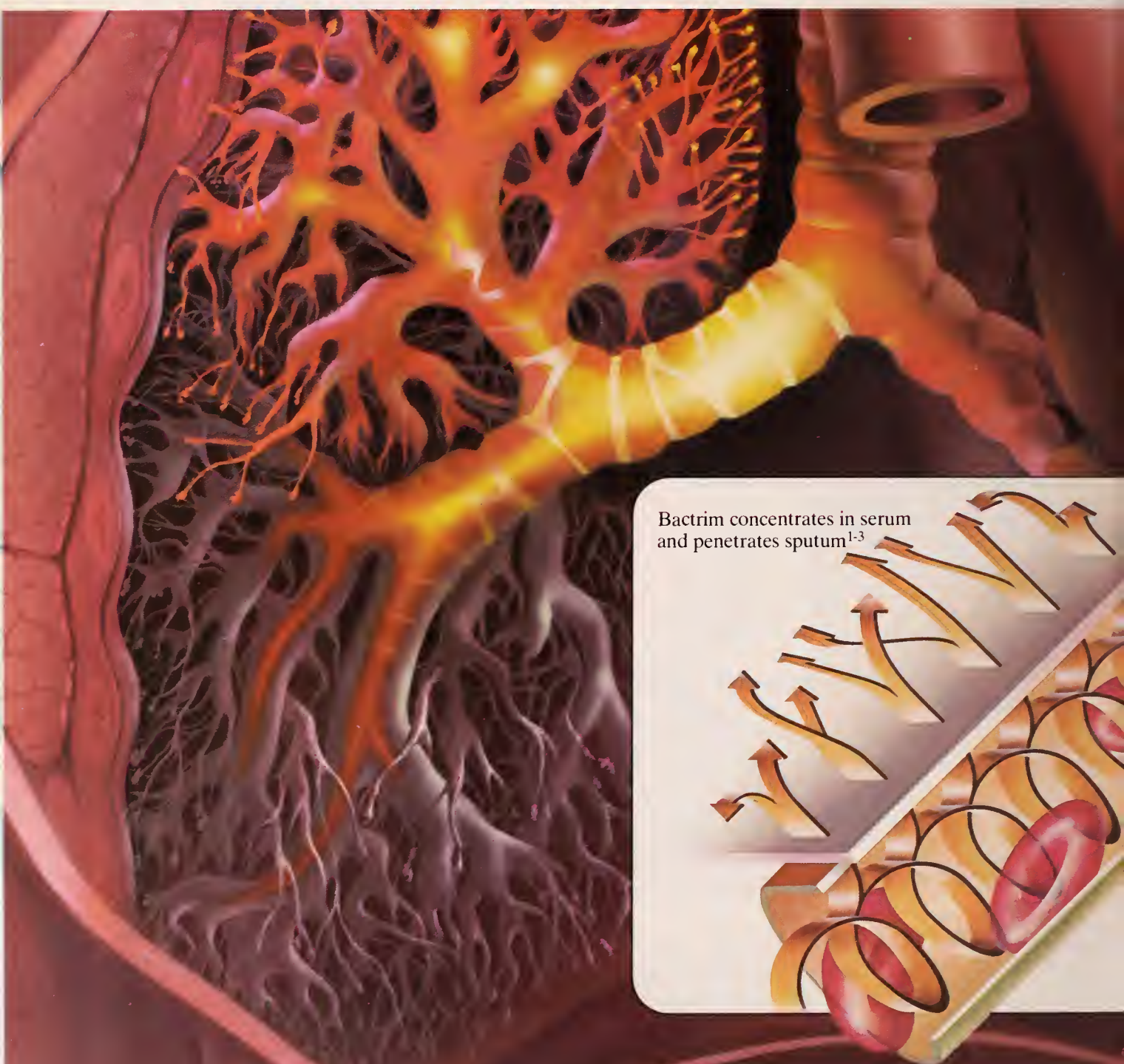
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J-9043-4 July 1981

Bactrim™ attacks the
(trimethoprim and sulfamethoxazole/Roche)
in acute exacerbations



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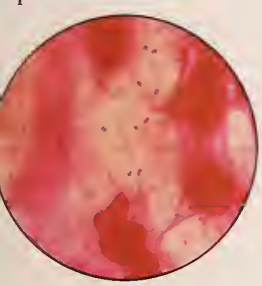
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of chronic bronchitis*

Bactrim clears sputum of susceptible bacteria

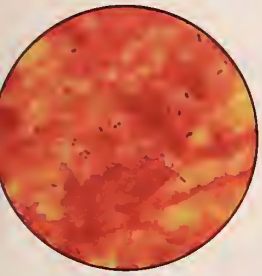
In sputum cultures from patients with acute exacerbations of chronic bronchitis, *H. influenzae* and *S. pneumoniae* are isolated more often than any other pathogens.[4,5] One study of transtracheal aspirates from 76 patients with acute exacerbations found that 80% of the isolates were of these two pathogens.[5]

Bactrim is effective *in vitro* against most strains of both *S. pneumoniae* and *H. influenzae*—even ampicillin-resistant strains. And in acute exacerbations of chronic bronchitis involving these two pathogens, sputum cultures taken seven days after a two-week course of therapy showed that Bactrim eradicated these bacteria in 91% (50 of 55) of the patients treated.[6]

acks *H. influenzae*—even
mpicillin-resistant strains



attacks *S. pneumoniae*



Bactrim reduces coughing and sputum production

In three double-blind comparisons with ampicillin *q.i.d.*, Bactrim DS proved equally effective on all clinical parameters.[7-9] Bactrim reduced the frequency and severity of coughing, reduced the amount of sputum produced and cleared the sputum of purulence.

Bactrim has the added advantages of *b.i.d.* dosage convenience and a lower incidence of diarrhea than with ampicillin, and it is useful in patients allergic to penicillins.

Bactrim also proved more effective than tetracyclines in 10 clinical trials involving nearly 700 patients.[10] Overall clinical condition of the patients, changes in sputum purulence, reduction in sputum volume and microbiological clearance of pathogens—all improved more with Bactrim therapy than with tetracyclines. G.I. side effects occurred in only 7% of patients treated with Bactrim compared with 12% of tetracycline-treated patients. (See Adverse Reactions in summary of product information on next page.)

Bactrim is contraindicated in pregnancy at term and nursing mothers, infants under two months of age, documented megaloblastic anemia due to folate deficiency and hypersensitivity.

Bactrim DS. For acute exacerbations of chronic bronchitis in adults* when it offers an advantage over single-agent antibacterials.

References: **1.** Hughes DTD, Bye A, Hodder P: *Adv Antimicrob Antineoplastic Chemother 1/2*:1105-1106, 1971. **2.** Jordan GW *et al: Can Med Assoc J 112*:91S-95S, Jun 14, 1975. **3.** Beck H, Pechere JC: *Prog Antimicrob Anticancer Chemother 1*:663-667, 1969. **4.** Quintiliani R: Microbiological and therapeutic considerations in exacerbations of chronic bronchitis, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts;* Princeton Junction, NJ, Communications Media for Education, Inc., 1980, pp. 9-12. **5.** Schreiner A *et al: Infection 6*(2):54-56, 1978. **6.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **7.** Chodosh S: Treatment of acute exacerbations of chronic bronchitis: results of a double-blind crossover clinical trial, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts. Op. cit.*, pp. 15-16. **8.** Chervinsky P: Double-blind clinical comparisons between trimethoprim-sulfamethoxazole (Bactrim™) and ampicillin in the treatment of bronchitic exacerbations. *Ibid.*, pp. 17-18. **9.** Dulfano MJ: Trimethoprim-sulfamethoxazole vs. ampicillin in the treatment of exacerbations of chronic bronchitis. *Ibid.*, pp. 19-20. **10.** Medici TC: Trimethoprim-sulfamethoxazole (Bactrim™) in treating acute exacerbations of chronic bronchitis: summary of European clinical experience. *Ibid.*, pp. 13-14.

Economical b.i.d.

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole/Roche)

*Due to susceptible organisms. **Please see next page for summary of product information.**

Bactrim™

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS:

Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100, Tel-E-Dose* packages of 100, Prescription Paks of 20 and 28. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500, Tel-E-Dose* packages of 100; Prescription Paks of 40. *Pediatric Suspension,* containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml), cherry flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension,* containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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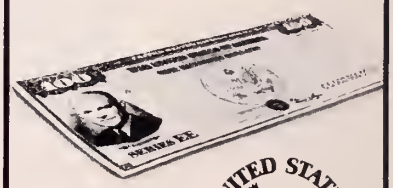
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EDITORIAL

The Ubiquitous Disease

America needs large and long doses of Elavil for a serious and devastating depression. Electroconvulsive therapy such as applied 34 years ago must be avoided.

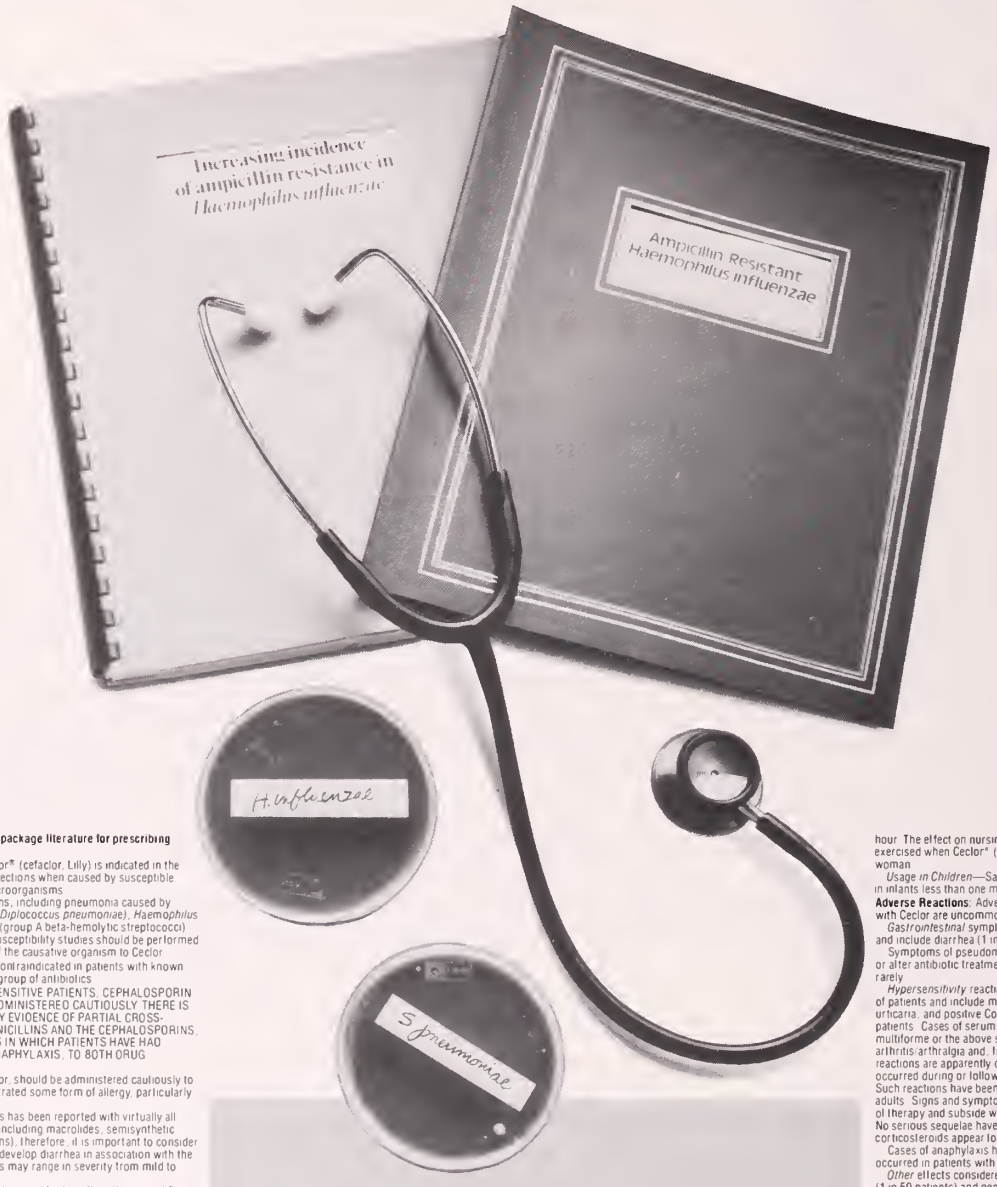
Thousands of competent, experienced personnel have no work because product consumption is depressed, each defect aggravating the other. Dissatisfaction with the products is rampant because the burgeoning industry of the seventh decade has now become inferior. Technology has progressed beyond industry's ability to absorb it. Factories close. The breathless growth of computer and sophisticated manufacturing methods cannot be grafted on the old presses. To build new factories is not within the economic energy remaining in the sick industries. To man the new factories requires extensive education and revision of the old capabilities. The laid off masses cannot accommodate the new technology in the new factories which cannot be built.

America needs an industry which can energetically incorporate the new technology now. This industry needs to steadily grow, progress and produce improving products continually. It needs to have access to a large, adequate supply of competent, educated, current and dedicated workers. The product needs to be of consistent superior quality to suit the actual and increasing needs of its consumers. The consumers need to be of such numbers and in such real need that they can with satisfaction and pride support the growing industry and abstain from defecting to superior products from the Orient and Europe.

American medicine is the industry which is satisfying these needs and developing into the future with imaginative energy. American medicine has not faltered to cause or because of the depression. Of this we are and the government should be proud.

A. Evan Overstreet, M.D.

An added complication... in the treatment of bacterial bronchitis*



Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor
Pulvules®, 250 and 500 mg

Brief Summary. Consult the package literature for prescribing information

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins). Therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out

Precautions: *General Precautions*—If an allergic reaction to Ceclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly)

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis

Usage in Pregnancy—Pregnancy Category B—Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response this drug should be used during pregnancy only if clearly needed

Nursing Mothers—Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor® (cefaclor, Lilly) is administered to a nursing woman

Usage in Children—Safety and effectiveness of this product for use in infants less than one month of age have not been established

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70)

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients)

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician

Hepatic—Slight elevations of SGOT, SGPT, or alkaline phosphatase values (1 in 40)

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40)

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200)

[061782R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.*

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information

References

1. Antimicrob. Agents Chemother., 8:91, 1975
2. Antimicrob. Agents Chemother., *11*:470, 1977
3. Antimicrob. Agents Chemother., *13*:584, 1978
4. Antimicrob. Agents Chemother., *12*:490, 1977
5. Current Chemotherapy (edited by W. Siegenthaler and R. Luthy), II:880. Washington, D.C.: American Society for Microbiology, 1978
6. Antimicrob. Agents Chemother., *13*:861, 1978
7. Data on file, Eli Lilly and Company
8. Principles and Practice of Infectious Diseases (edited by G.L. Mandell, R.G. Douglas, Jr., and J.E. Bennett), p. 487. New York: John Wiley & Sons, 1979

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AUXILIARY



Ellen C. Sklar

The Radisson Plaza Lexington will host the 61st Annual Convention of the Auxiliary to the Kentucky Medical Association April 18-20, 1983. It is a special year for the Auxiliary as we celebrate our diamond anniversary and our fervent wish is that auxilians will come to celebrate this gala occasion with us! The Auxiliary was organized in 1923 and our primary purpose, then as now, is to improve the health and welfare of all Kentuckians.

This year the format is a blend of necessary auxiliary business as well as educational seminars and workshops. The topic seminars will cover potential community action programs, offer suggestions on financial planning and will define what is news and how to communicate it to the newspapers. We offer these programs to keep our membership informed of the challenge of changing times.

The Auxiliary is honored to have as its guest the President-elect of the American Medical Association Auxiliary, Mrs. John G. Bates of Cuthbert, Georgia. Mrs. Bates will address the House of Delegates and install the 1983-1984 officers.

This invitation is extended to all physicians' spouses—not just those who hold office or are delegates to the convention. Please join us in Lexington in April.

61st Annual Convention—1983
Lexington, Kentucky
The Challenge of Changing Times

MONDAY, APRIL 18 (EST)

12:00 p.m.	Finance/Budget Committee
2:00 p.m.	Planning/Development Committee
3:00 p.m.	Bylaws Committee
4:00 p.m.	Membership Committee
	(All committee meetings in President's Suite)
6:30 p.m.-	**Registration & set up exhibits**
7:30 p.m.	
7:30 p.m.	**Pre-Convention Board meeting**

TUESDAY, APRIL 19

8:00 a.m.	**Registration, set up exhibits**
to	(coffee, tea, etc. will be served
12:00 Noon	before and between workshops)
8:00 a.m.	**Open Hearing on Bylaws Revision**
	AKMA Bylaws Committee
	Mrs. Gordon Betts, Chairman
	Bluegrass News Workshop
	BGN Editor and Assistant Editor
	Mrs. Carl Evans, Editor
9:00 a.m.	**Topic Seminars**
to	**Substance Abuse**
10:00 a.m.	Larry Roberts, Commonwealth
and	Attorney
10:30 a.m.	**Financial Planning**
to	Ann D. Aaron, Attorney At Law
11:30 a.m.	**What Is News**
	Courier Journal Reporters
	Maureen McNerney and
	Linda Watkins
	Child Abuse
	Otto Kaak, M.D.
12:00 p.m.	**Luncheon and AMA-ERF Auction**

TUESDAY, APRIL 19

1:30 p.m. **House of Delegates Convention**

5:30 p.m. **Reception**
Honoring President-elect Mrs. Charles Veurink, and the 1983-1984 Board.
Madison County, hosting

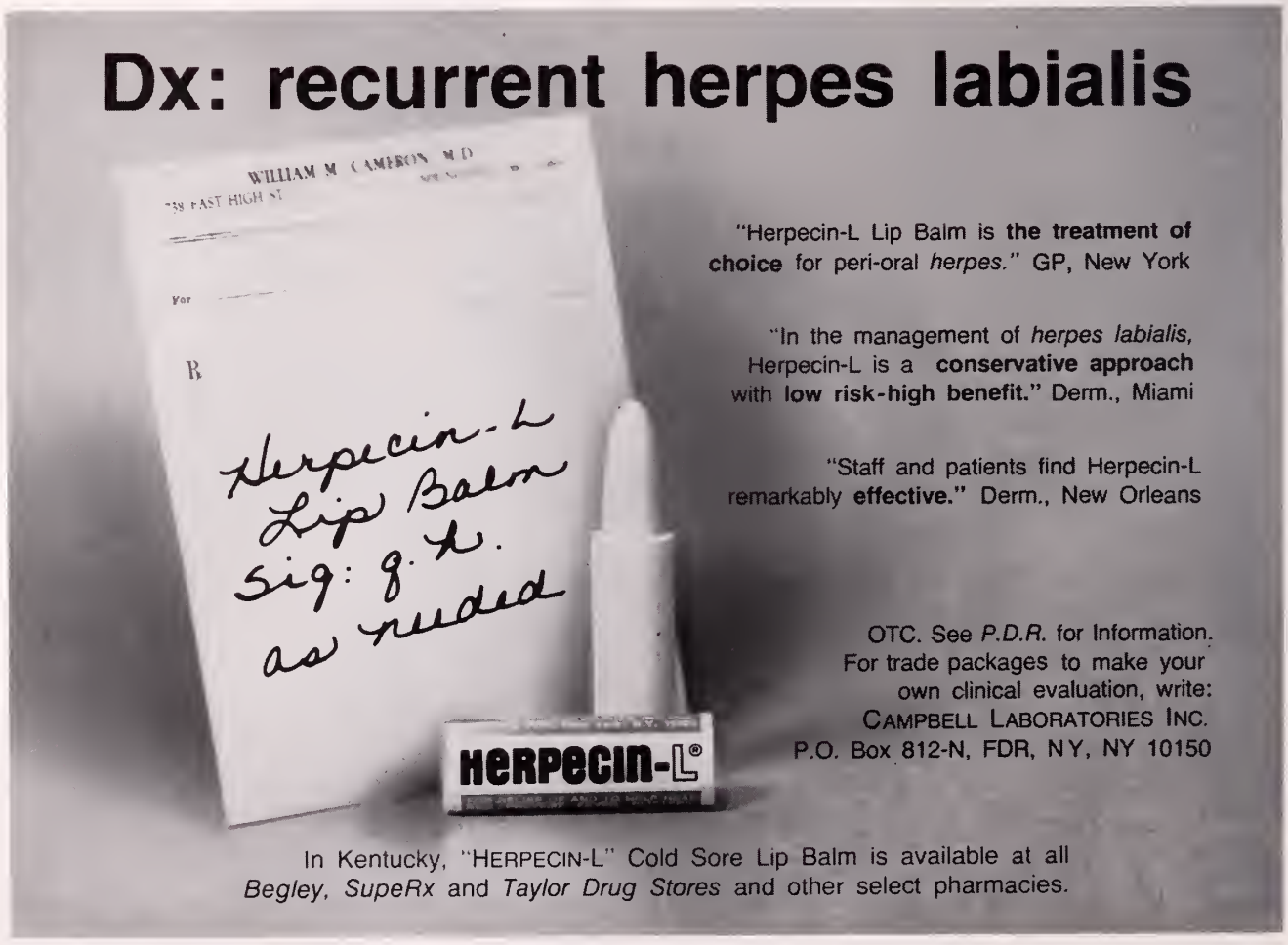
7:00 p.m. **Dinner**
Honoring AKMA Past Presidents, County Presidents and Honorary Members on the occasion of the 60th Anniversary. Installation of 1983-1984 Officers
Exhibit of Clogging by the Kentucky Clogging Association

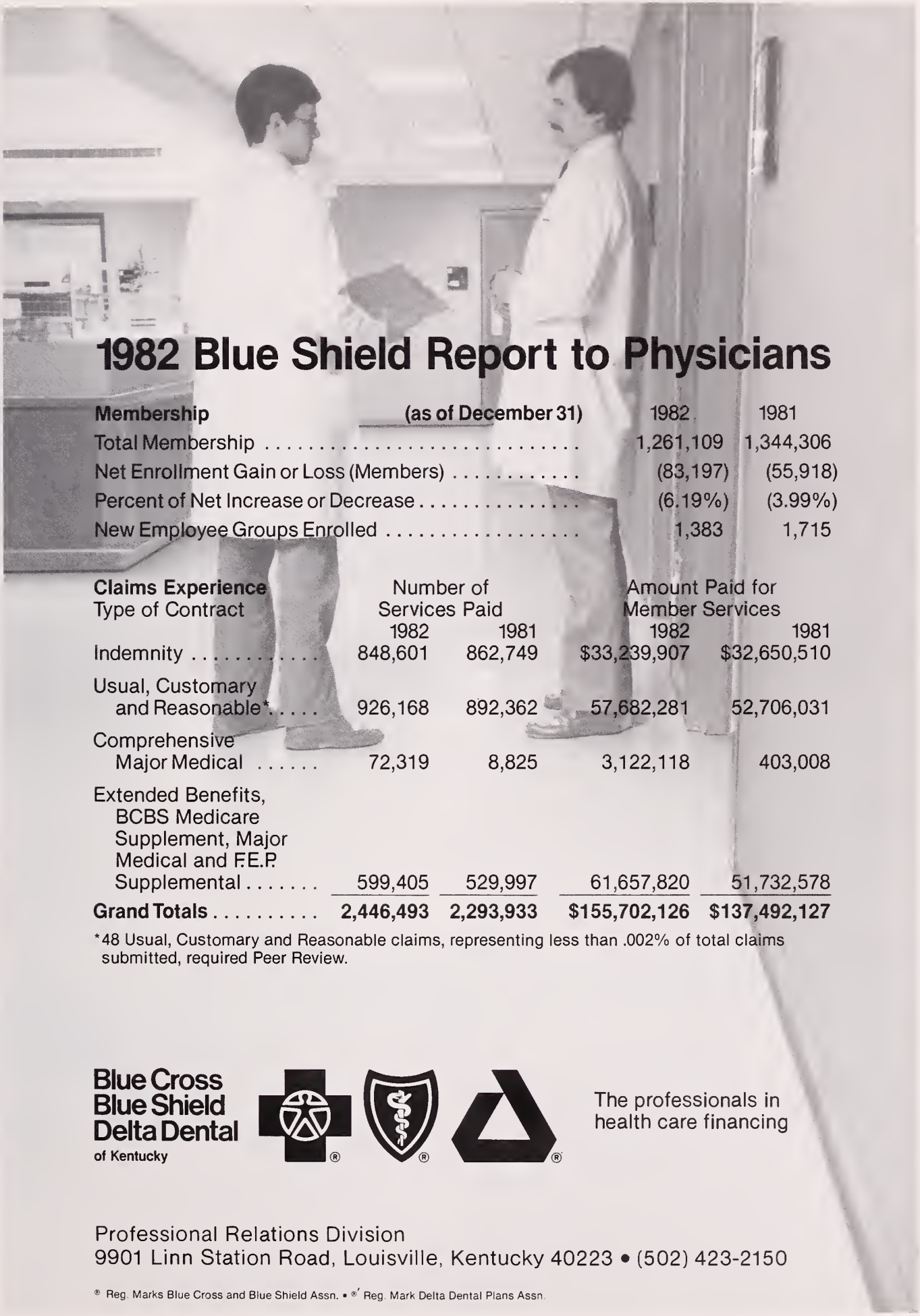
WEDNESDAY, APRIL 20

8:00 a.m. **Breakfast**
Everyone invited

9:00 a.m. **Post-Convention Board**
1983-1984 Board
Mrs. Charles Veurink, Presiding
Mrs. John G. Bates, Speaker

Pre-registration and meal reservations forms will be in the March issue of the Bluegrass News. Special Radisson Plaza Lexington hotel reservation envelopes will be sent to the county presidents. For further information contact Mrs. Jamie Jacobs (Jean), 1347 Strawberry Lane, Lexington, Ky 40502. (606) 269-7096.





1982 Blue Shield Report to Physicians

Membership (as of December 31)	1982	1981
Total Membership	1,261,109	1,344,306
Net Enrollment Gain or Loss (Members)	(83,197)	(55,918)
Percent of Net Increase or Decrease	(6.19%)	(3.99%)
New Employee Groups Enrolled	1,383	1,715

Claims Experience Type of Contract	Number of Services Paid		Amount Paid for Member Services	
	1982	1981	1982	1981
Indemnity	848,601	862,749	$33,239,907	$32,650,510
Usual, Customary and Reasonable*	926,168	892,362	57,682,281	52,706,031
Comprehensive Major Medical	72,319	8,825	3,122,118	403,008
Extended Benefits, BCBS Medicare Supplement, Major Medical and F.E.P. Supplemental	599,405	529,997	61,657,820	51,732,578
Grand Totals	**2,446,493**	**2,293,933**	**$155,702,126**	**$137,492,127**

*48 Usual, Customary and Reasonable claims, representing less than .002% of total claims submitted, required Peer Review.

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BOOK REVIEWS

Stephen Z. Smith, M.D.
Assistant Scientific Editor

Basic & Clinical Pharmacology

Edited by B. G. Katzung
Lange Medical Publications, 1982, 777 pages

This Lange series book has evolved from its ancestral Review of Medical Pharmacology, somewhat of a distinguished and frequently read review. Such texts are designed to aid and abet the student of pharmacology in pursuit of both an understanding of the fundamentals and a perspective to future developments. Each section represents a synthesis of basic chemistry and dynamics with the relevant instruction for instituting their use.

Doctor Katzung has charged his family of authors with the task of not only producing their chapters but also with maintaining some integration and community. This has been done admirably and despite the poly-authorship, the book reads easily.

Initial chapters are predictably preoccupied with basic skeletal aspects of pharmacology. Cholinergic and adrenergic receptors are well discussed with clarity if not compassion! Then a litany of drugs, sequestered into their type of action rather than structure, is unfolded. Final short—too short—chapters deal with such clinically relevant topics such as drug toxicology, abuse and prescription writing. Appendices of drug interactions and interference with laboratory tests are included, but the former chapter is unbelievably abbreviated in view of its relevance.

Lange Medical publications have become an universally accepted and welcomed form of review.

Medical Care in Pioneer Illinois

John K. Crellin
Published by The Pearson Museum, 128 pages

Medical history is not only interesting for some of us, but due the respect for its lessons. That is to understand our predecessors' journey across the land and up the medical sophistication pyramid is to recognize our own challenges with humility.

This book is the offspring of the medical Humanities department at Southern Illinois University which has elected to have its members explore the medical world. Not surprisingly, the scene is Illinois, but south of the state's metropolis, Chicago. As a microcosm this land, flanked by rivers Ohio and Mississippi, and fertile, was an ideal frontier promising its occupiers some rewards for their travail. Frontier doctors tended to these people, following the emigration from the east. Education was academic for the most part with some spending time with senior physicians as proteges. Procedures were imagined and created, drugs were developed from herbs and chemicals at hand, and medical practice took form. The business of medicine was not really different than today. Competition was inevitable, debts and collection were of concern, and regulation was threatened if not regularly enforcable because of communication inadequacies.

This time of the 19th century is germinal, according to the author, by virtue of its precedent setting in a doctor-patient relationship, community and organizational development among medical people and in infusing this region with the expectation and experience of having medical care.

An appendix contains both a reproduction of and a printed out version of a fee schedule, which curiously seems to be relegated its unique place in the book for no good reason.

Notes and references are voluminous but not unexpected from an historian author.

Nevertheless this historical vignette is a nice book, a pleasant telescopic picture of far gone but not forgotten times.

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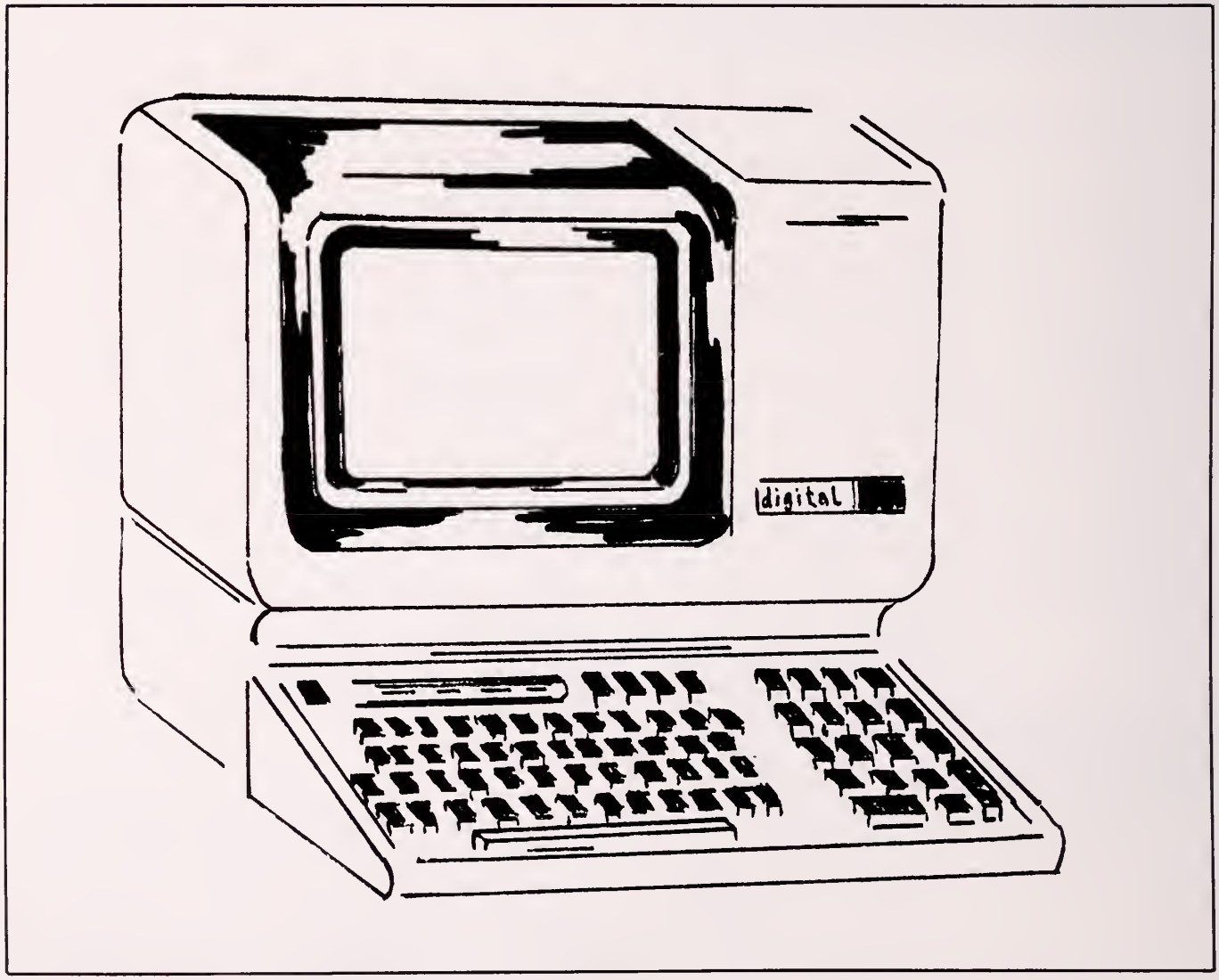
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SPECIAL ARTICLE

Practice Management



Introduction to Computers

com • put • er, *n*, an electronic machine that performs rapid, complex calculations or compiles and correlates data.

The world of computers is both fascinating and confusing. To understand it, one must learn a whole new language that deals with the basic concepts of the computer and how it works.

Computers are not new to society, but their everyday utilization by everyone in both business and at home is new. We marvel at the accomplishments of computers in being able to land men on the moon, aid in medical diagnosis and maintain our bank account, but we give little thought to how it accomplishes these feats.

A computer system is comprised of two parts: software (programs) and hardware (equipment). With a basic knowledge of the components of a computer, one may more easily understand the advantages and possible disadvantages of a computer.

Hardware

There are five major units that collectively comprise a computer system:

Input—Transfers instructions and data from various media into the computer system. The most common input device is a CRT (video) terminal but could also include magnetic tape, diskettes, hard disks and telecommunications.

Central Processor (CPU)—Controls and supervises all other units. Performs all logical and mathematical computations and executes instructions specified in programs. Only one program at a time can be executed in the CPU.

Main Memory—The work space of the system that temporarily stores instructions for the program currently running and small amount of data. Two common types of memory are:

RAM (Ramdom Access Memory)—Storage or memory which allows data (such as documents) to be stored randomly and retrieved directly by an address location. The system accesses the addressed material, with no need to read through intervening data. Most mini-computers use this type of memory.

ROM or PROM (Programmable Read Only Memory)—Refers to the solid state memory for storing programs which can be customized to your needs before delivery of the system. PROM cannot be altered once it has been programmed. Home video games are an example of this type of memory.

Auxiliary Storage—Stores computer programs until they are needed and large amounts of data. Storage devices include magnetic tape, diskettes, removable disks and Winchester drives. There are two types of storage:

On-line Storage—A storage device that is always available at any time during the system's operation.

Off-line Storage—Data is written to a storage device which enables the removal of the media. This media can be reaccessed by remounting it on the storage device.

Output—Transfers information from the computer system onto various media (magnetic tapes, diskettes, or hard disks) or as the display at a video screen or printer.

These five major units of a computer system plus software comprise an operating system.

Software

The instructions that control and operate the hardware are collectively called software. Without these basic codes there can be no operation of the system. There are two major types of software:

Operating Software—The set of instructions that control all the units of a computer system by managing their time and access to each individual piece of hardware. Manufacturers will normally sell the operating software with their hardware as part of a package deal. This software contains one computer language which is usually BASIC, and utility programs to maintain your files and monitor the system's hardware. A programmer could be retained to develop software applications using the language available in the operating software, but this is rarely done because it is too restrictive. BASIC is a general computer language without a lot of power to undertake difficult mathematical tasks. Thesefore, it is necessary to include additional software or languages to meet changing goals.

Support Software—Consists of prewritten programs or different software language compilers (enables you to write in other languages such as COBOL, FORTRAN and BASIC+2). These programs are added to the system and are managed by the operating system software. Examples of support software would be word processing, accounting, and record management. There may also be a need for a communications software package. When utilized with the necessary hardware, it can enable the user to access and converse with other systems.

It is important to note that hardware without the appropriate software, or vice versa, will cause numerous problems. Care should be taken to examine and see an actual demonstration of both hardware and software before leasing or purchasing a system.

How does a computer operate? We know that we must have hardware (equipment) to carry out the instructions which are provided by the software, but how does the system understand these codes and implement them and what does it do with the information we input?

Software is written by programmers who use computer languages to list a set of instructions to carry out a particular request, job or function. It is essentially a cookbook approach to solving a problem. The programming code, or "Source Code" as it is usually referred to, is input into the computer. The computer, using a compiler (for the computer language being used), will convert the code into a format that the system can easily read. Initial computer systems required a programmer to code directly into the computer's language. However, today the old computer languages are giving way to "interactive languages" that allow the computer user to request information based on simple English instructions or questions. During this computation the computer changes the written programming code into a numeric configuration based on the octal system (Base 8) which will then be converted to the binary system. Binary, or Base 2, consists of only two digits, 0 and 1. Using the binary system, "1 = on" and "0 = off." The computer consists of thousands to millions of micro switches. Setting these switches to "on" or "off" establishes a binary number, which when converted, becomes a number of character. The individual units that make up this number are called "bits." A bit is the smallest unit of information used in digital computers and must always be either a 0 or a 1. Bits are usually awkward to work with and therefore are grouped together to form larger elements of information called "bytes" and "words." Both a byte and a word contain a number of bits. Bits are grouped together and handled as a single entity known as a word. A computer word consists of a fixed number of bits that are processed as a single unit of configuration. A single computer word might represent a single decimal number, three decimal numbers, two letters of the alphabet, or perhaps an actual English word depending on its use.

The number of bits contained in one computer word depends on the design and size of the system. Micro-computers contain 8 to 16 bits per word, whereas mini-computers may be from 12 to 18 bits and the large main frame systems from 36 to 60 bits.

In some digital computers, words are divided into smaller subunits called "bytes." A byte is either one-half or one-quarter the size of a computer word. Bytes, like words, contain a fixed number of bits but are treated as a single unit. Again, both a byte and a word may consist of either data or instructions. The byte is the smallest unit of information that can be addressed, the bit can not.

The byte is also used to determine the size of a "block," which depending on the system, may be from 400 to 600 bytes large. The block is used by the computer system to designate file and media size and to determine the amount of data that will be accessed by memory at any given point. A one megabyte disk will contain 1,000,000 bytes of available space. For approximate configuration in laymen terms, a block can hold the same amount of information as a one page letter. Therefore, when a computer vendor indicates that his system will store 5MB of information, that would equate to 1,000 pages of text or data. There are, however, other factors that control the file's organization and space allocation that are directly controlled by the system, which directly affects the actual amount of space available. It is important to have the computer vendor explain what the actual available space is and to actually show examples of the space utilized with sample files.

Memory Size

Although we previously mentioned memory as the work for the central processor, we did not touch on how it manages its job, nor did we address how a novice is to determine what size memory he should be considering for his particular application.

Memory size refers to the "total number of words or the total number of locations" that can be stored in memory. The letter "K" is normally used to indicate the size of a particular memory. "K" represents the value 2^{10}, which equals 1,024. Thus a 1K memory contains 1,024 storage locations. It is a common practice to round off memory to 1,000, thus K becomes a shorthand notation for 1,000. Memory sizes are incremented by multiples of 4K. Most home computers start at 16K, with an average size for a micro at 256K and a mini at 1,000K or 1MB. What is important about memory is "Is it large enough to process the application requested?" If the job requires 16K of memory to operate and you only have 16K available, the program would not be able to run because part of the 16K is required by the operating system and only a portion of memory is left to do the application. Therefore, it is important to know the limitations of the systems you review, besides being

Continued on page 250

GLOSSARY

BASIC — Beginner's All-Purpose Symbolic Instruction Code—a computer language that requires only an understanding of English.

BASIC+2 — a higher level of BASIC that is capable of more complex operation and file manipulation than BASIC.

Binary — a number system in which the base used is two, each number being expressed by using only two digits, specified by 0 and 1.

Bit — a contraction of binary digit. A bit is the smallest of binary information. For example, the binary number 101 is composed of three bits.

Block — a maximum number of characters or bytes grouped together for use by the computer to move data to and from memory.

Byte — the smallest addressable unit in a computer.

COBOL — Common Business Oriented Language, is a higher-level, English-like computer programming language normally utilized in accounting and other business related operations using data files.

Compiler — Software that translates a program language such as FORTRAN, COBOL, or BASIC into machine-level language.

Computer System — an automated system that is capable of computing large quantities of information and storing this information for rapid reference.

Diskette or Floppy Disk — a flexible disc of magnetic coated mylar enclosed in a protective envelope. Standard size diskettes are 7.8″ and hold 35 to 100 pages. Mini floppy diskettes are 5¼″ diameter discs capable of holding approximately 60 pages of text.

Disk — high capacity, random access, magnetic storage media. Disks may be non-removable or removable allowing replacement for text file changes on additional text storage. Capacities range from 500 to over 10,000 pages of text per disk.

FORTRAN — an acronym for FORmula TRANslater. A widely used programming language used to perform mathematical, scientific and engineering computations.

Hardware — the mechanical or electronic equipment which is combined with software (programs, instructions, etc.) to create a computer system.

Magnetic Tape — a storage device in which data is stored in the form of magnetic spots on coated plastic tape.

Main Frame Computer — 1) used to denote large industrial computers with huge memories and storage capabilities.
2) the central processor and memory of a system.

Micro Computer — a very small computer system usually with less than 126K memory, limited on-line storage and minimal input/output capabilities.

Mini Computer — middle range computer utilized by small to medium size businesses. Memory range from ¼MB to 5MB and on-line storage limited to 1½ billion bytes.

Octal — a number system with the base of 8 used by compilers to convert English or programmer code into a number configuration that can then be converted to binary code.

Software — a term coined to contrast computer programs with the "iron," or hardware, of a computer system. Software is a stored set of instructions which govern the operation of a computer and make the hardware run.

Source Code — name given to the programmer code for a particular set of instructions. Computer instruction readable by a human.

Telecommunication — transcription of data and instruction over phone lines, microwave or satellite communication.

Winchester Drive — generic name used to describe a high capacity, random access magnetic storage media which is non-removable. Characteristic of large storage from 121MB to 456MB.

Word — an ordered set of characters which occupies one storage location and is treated by the computer as a unit and transferred as such. Word lengths may be fixed or variable depending on the particular computer.

aware of the memory requirements for the operating software, hardware and support software. Also, if you plan a multi-user system, be aware that each additional terminal or printer will require additional memory. For example: If you had 126K of memory, you would be able to support the following devices and programs; operating system software (60K) and two operators using 31K each would use up the entire memory space. If you wished to add additional operators, you would need at least 31K more of memory space for each one. The 31K designation per user could be smaller, but in this example represents the memory space needed to run the largest job. If sufficient memory space were not available, then the operator would have to wait until one of the other operators was done.

The anatomy of a computer is not that complex if you take the time to divide it into sections and study each point. A working knowledge of the basic functions and operations of a computer system will greatly enhance your skills in the evaluation, purchase, and utilization of a computer system.

The Association is tentatively planning to offer monthly classes commencing mid summer for physicians, office managers and personnel on the basics of computer, word processing and data processing. The classes will be small and designed to allow interaction with participants and instructors, while providing "hands on" demonstrations and utilization. Check future issues of the *KMA Journal* and "Communicator" for additional details.

This is the second of a series of articles written by Joe Witherington, Jr., System Manager for KMA and KMIC.

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Roche salutes the history of Kentucky medicine

THE DOCTOR WHO PIONEERED ABDOMINAL SURGERY



Dr. Ephraim McDowell

In 1795, Dr. Ephraim McDowell of Virginia settled in the village of Danville, Kentucky. His practice took him on horseback over hundreds of miles of wilderness.

Nevertheless, his reputation as a skillful and successful surgeon spread—especially for lithotomies, which he performed 22 times without losing a patient.[1]

First ovariotomy

McDowell's true moment in history came in 1809, when he performed the first known ovariotomy for removal of a tumor from Jane Crawford, then 47. The procedure was completed in 25 minutes, and Mrs. Crawford not only recovered but lived to age 78.[1,2]

This landmark surgery was performed under the most primitive conditions—without anesthesia or antisepsis—while, the story is told, brave Mrs. Crawford distracted herself as best she could by singing hymns.[2]

His published reports of this case, along with two others in 1817 and an additional two in 1819, established Dr. McDowell as the physician who saved women afflicted with ovarian disease from their previously hopeless situation and, further, marked the beginning of abdominal surgery.[1] To European medical practitioners, Dr. McDowell's accomplishments offered clear evidence that medicine was coming of age in America.[3]

References: 1. Garrison FH: *An Introduction to the History of Medicine,* 4th ed Philodelphio, W B Sounders Company, 1929, pp 507-508 **2.** Packard FR *History of Medicine in the United Stotes,* vol II New York, Hafner Publishing Compony, 1963, pp 727-728 **3.** Shaftel N The evolution of Americon medicol liferoture, in *History of American Medicine,* edited by Marti-Ibañez F, New York, MD Publicotions, 1959, p 106



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When the history reveals anxious depression...

For the estimated 70 percent of nonpsychotic depressed patients who are also anxious,[1] Limbitrol provides both amitriptyline, specific for symptoms of depression, and the effects of Librium® (chlordiazepoxide HCl), the tested and dependable anxiolytic. Limbitrol is, therefore, a better choice for these patients than dual agents that contain a phenothiazine, a class of antipsychotic drugs used infrequently in nonpsychotic patients.[1]

62% of Overall Improvement...Within the First Week

Limbitrol also has a rapid onset of action which may lead to greater patient compliance. In a multicenter study, patients taking Limbitrol experienced 62% of their overall improvement within the first week of therapy.[2]

In another multicenter study,[3] the following symptoms associated with anxious depression were significantly reduced during the first two weeks of therapy:

- ☐ Headache—79%
- ☐ Early insomnia—91%
 Middle insomnia—87%
 Late insomnia—89%
- ☐ Gastrointestinal upset—73%

In two multicenter studies, only 1.9% of Limbitrol patients experienced cardiovascular side effects.[3]

Patients should be cautioned about the combined effects with alcohol or other CNS depressants and about activities requiring complete mental alertness such as operating machinery or driving a car.

References: 1. Rickels K: Drug treatment of anxiety, in *Psychopharmacology in the Practice of Medicine,* edited by Jarvik ME; New York, Appleton-Century-Crofts, 1977, p. 316. **2.** Feighner JP *et al: Psychopharmacology 61*:217-229, Mar 1979. **3.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ

In moderate depression and anxiety

Limbitrol® IV

Tablets 5-12.5 each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)
Tablets 10-25 each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt)

Please see summary of product information on following page.

LIMBITROL® TABLETS Ⓥ Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).
***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude toxic, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.
Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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Manati, Puerto Rico 00701

Health and Safety Tip From the American Medical Association

MARKERS LISTED TO IDENTIFY ALCOHOLICS

How can you tell that a regular, heavy drinker has crossed over the line and become an alcoholic, who no longer can control his or her drinking?

The American Medical Association in its Manual on Alcoholism points to some markers to help identify the alcoholic.

1. Increasing consumption of alcohol, with frequent, perhaps unintended, episodes of intoxication.

2. Drinking to handle problems or relieve symptoms.

3. Obvious preoccupation with alcohol and the frequent need to have a drink.

4. Surreptitious drinking or gulping of drinks.

5. Tendency toward making alibis and weak excuses for drinking.

6. Refusal to concede what is obviously excessive consumption and expressing annoyance when the subject is mentioned.

7. Frequent absenteeism from the job, especially following weekends and holidays.

8. Repeated changes in jobs, particularly if to successively lower levels, or employment in a capacity beneath ability, education and background.

9. Shabby appearance, poor hygiene, and behavior and social adjustment inconsistent with previous levels or expectations.

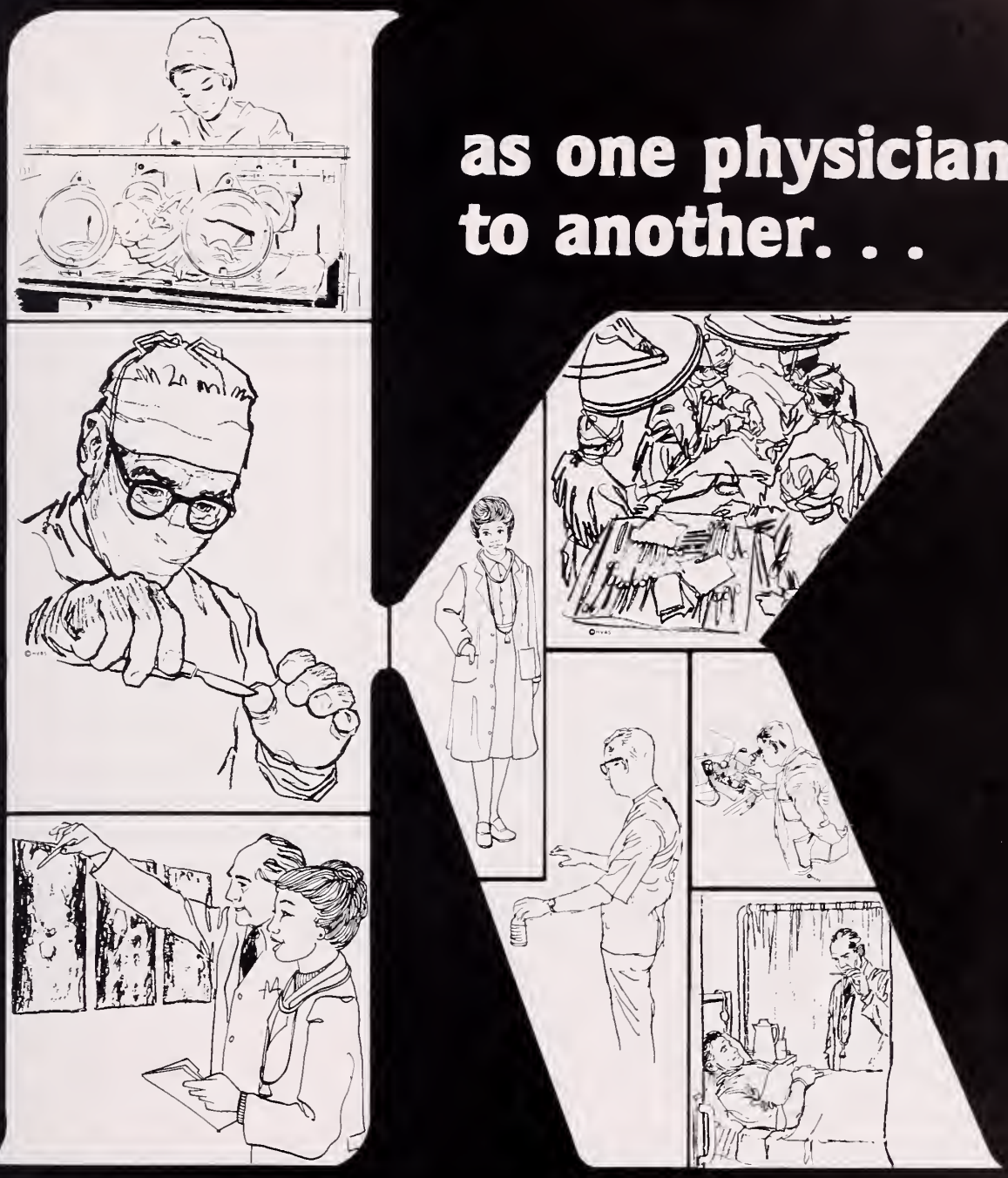
10. Persistent vague physical complaints without apparent cause, particularly insomnia, stomach upsets, headaches, loss of appetite.

11. Multiple contacts with the health care system with disorders that are alcohol caused or related.

12. Persistent marital and family problems, perhaps with multiple marriages.

13. History of arrests for drunkenness or drunken driving.

Submitted by the KMA Impaired Physicians' Committee



as one physician to another. . .

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Pinworms work the night shift



Artist's interpretation:
The nocturnal egg-laying of the female pinworm causes acute perianal itch...making children shift sleeplessly through the night.

Put pinworms out of work...

Promptly paralyzes pinworms and roundworms

Antiminth® (pyrantel pamoate) has a unique, rapid immobilizing effect on worms. Unlike mebendazole, which blocks glucose uptake—slowly "starving" helminths to death—Antiminth quickly acts on the neuromuscular junction to promptly paralyze parasites.

97% efficacy with a single dose

A single dose of Antiminth delivers rapid clinical and parasitological cures, "Single doses... showed high overall efficacy against *Enterobius vermicularis* (97.2%) and *Ascaris lumbricoides* (97.5%)."[1]

Simple, well tolerated therapy

Antiminth offers ease of administration and patient tolerance. "...when compared to the other single dose agents available, [Antiminth] has the advantage of being non-staining and may be better tolerated."[2]

The dosage form children like

Antiminth is available as a pleasant tasting, caramel-flavored oral suspension. Effective in just



one dose against pinworm and roundworm—in both children and adults—Antiminth is easy-to-administer and easy-to-take.

Respected around-the-world

In some parts of the world, large populations are afflicted with helminthic infections. Physicians in endemic areas have become experts on parasitic diseases—and have come to rely on Antiminth for the rapid cure of infestations. Antiminth is recommended as an agent of first choice for pinworm and roundworm by leading medical authorities.[3]

Warnings

Usage in Pregnancy Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions

Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions

The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration

Children and Adults Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

References **1.** Pitts NE, Migliardi JR: *Clinical Pediatrics* 13:87, 1974. **2.** Modell W: *Drugs of Choice* 1980-1981. C. V. Mosby Co., St. Louis, 1980, p. 362. **3.** Goodman LS, Gilman A: *The Pharmacologic Basis of Therapeutics*, 6th edition, MacMillan Publishing Co., Inc., New York, 1980, p. 1032.

Pfizer

Pfipharmecs Division

Pfizer Inc. New York, N.Y. 10017

Prescribe Antiminth® Suspension

50 mg pyrantel base/ml

(pyrantel pamoate)

Cures pinworm and roundworm fast...with a single dose

SJW638

Stormy Weather

Let Ru-Tuss® Help Your "Stormy" Patient Come Closer to Spring

Prompt, effective treatment with Ru-Tuss® tablets offers welcome relief to winter-cold patients. Ru-Tuss® tablets ease congestion, relieve respiratory-tract itch and the need to sneeze.

RU-TUSS®
TABLETS

Each prolonged action tablet contains: Phenylephrine Hydrochloride 25 mg • Phenylpropanolamine Hydrochloride 50 mg • Chlorpheniramine Maleate 8 mg • Hyoscyamine Sulfate 0.19 mg • Atropine Sulfate 0.04 mg • Scopolamine Hydrobromide 0.01 mg • Each Ru-Tuss® tablet acts continuously for 10 to 12 hours.

- vasoconstrictor, antihistaminic actions
- rapid and prolonged relief of nasal and sinus congestion
- convenient b.i.d. dosage

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Brief Summary of Prescribing Information (see attached)

Brief Summary of prescribing information

RU-TUSS®

TABLETS

INDICATIONS AND USAGE: Ru-Tuss Tablets provide relief of the symptoms resulting from irritation of sinus, nasal and upper respiratory tract tissues.

CONTRAINDICATIONS: Hypersensitivity to antihistamines or sympathomimetics. Ru-Tuss Tablets are contraindicated in children under 12 years of age and in patients with glaucoma, bronchial asthma and women who are pregnant. Concomitant use of MAO inhibitors is contraindicated.

WARNINGS: Ru-Tuss Tablets may cause drowsiness. Patients should be warned of possible additive effects caused by taking antihistamines with alcohol, hypnotics, sedatives or tranquilizers.

PRECAUTIONS: Ru-Tuss Tablets contain belladonna alkaloids, and must be administered with care to those patients with urinary bladder neck obstruction. Caution should be exercised when Ru-Tuss Tablets are given to patients with hypertension, cardiac or peripheral vascular disease or hyperthyroidism. Patients should avoid driving a motor vehicle or operating dangerous machinery (See WARNINGS:).

OVERDOSAGE: Since the action of sustained release products may continue for as long as 12 hours, treatment of overdoses directed at reversing the effects of the drug and supporting the patient should be maintained for at least that length of time. Saline cathartics are useful for hastening evacuation of unreleased medication. In children and infants, antihistamine overdosage may produce convulsions and death.

ADVERSE REACTIONS: Hypersensitivity reactions such as rash, urticaria, leukopenia agranulocytosis, and thrombocytopenia may occur. Other adverse reactions to Ru-Tuss Tablets may be drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension/hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerostomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, dizziness and insomnia. Large overdoses may cause tachypnea, delirium, fever, stupor, coma and respiratory failure.

DOSAGE AND ADMINISTRATION: Adults and children over 12 years of age, one tablet morning and evening. Not recommended for children under 12 years of age. Tablets are to be swallowed whole.

Federal law prohibits dispensing without prescription.

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Readership Survey

The editors of the *Journal* commissioned a study to try to determine the *Journal* readership, its effect as to both scientific and socio-economic forums for organizational news and its capability as a vehicle to reach the practicing physician. Questionnaire cards were inserted in the February, May and August 1982 issues and sent to members on a selected random basis.

Although the responses to the current survey were not as relatively significant in comparison to past *Journal* surveys, the results do provide an objective basis on which to make judgments concerning modification if appropriate and to overall content of the magazine as a medical publication.

Questions posed, overall responses and an analysis of the responses are as follows:

1. This is a most gratifying response and gives clear indication of the readership and reader acceptability of the publication. Considering that busy physicians are confronted with substantial unsolicited and solicited reading material it can be assumed that the *Journal* rates highly from this response.
2. Obviously, the *Journal* must appeal to a general audience because the membership is represented by all specialties. The response rate to this question shows very high acceptability of the *Journal* as a scientific forum. This fact is fully substantiated in that there is consistently a waiting list of articles for publication while some other state journals offer no scientific articles at all.
3. Considering again that the *Journal* must appeal to a general audience, the response to this question is significantly positive. Other surveys indicate that most all physicians subscribe to at least one publication in their specialty area. The fact that the *Journal's* scientific articles are germane to 68% of the respondants is a strong indication of their practical value.
4. Advertising is essential to the financial operation of the *Journal* while at the same time offering some educational merit. This question was offered to determine if the advertising detracted from readability and the responses indicate that it does not.
5. The strong negative response to this question substantiates a presumption built into the survey. It was assumed that because of the availability of specialty journals and other publications and the fact that nearly all physicians in the state receive the *Journal*, it was not commonly shared. Negatively, the response total bolsters the presumption of the *Journal's* wide availability and readership access.
6. Considerable emphasis has been placed on continuously making the *Journal* more physically readable. Simple graphic theories such as use of bold face type and wide margins enhance reading ease. It is again gratifying that these efforts have produced the positive result that was sought.
7. The *Journal* must fill a multi-faceted role as a "family" medical magazine. Those readers interested in scientific portions may not be necessarily interested in organizational news yet the associational section is important to report what your KMA is doing. Readership of this section in comparison with the scientific articles is obviously quite high and it is important to note that the *Journal* is fulfilling both scientific and organizational functions.
8. Responses to this question indicated low interest. It is suggested that information contained in this section is for the most part provided through other forums more available and specific to the membership and member segments. Expansion of this section in the *Journal* is underway and it is hoped that this modification will enhance this sections value.
9. Particular emphasis has been given to the Special Features by the Editors. These features have ranged the spectrum of topics from scientific to political and because of the strong responses are obviously well accepted.
10. Solicitation of non-specific individual replies resulted in numerous comments that were impossible to succinctly collate and reproduce here. However, some comments solicited at random are offered.

1. Do you read the *Journal of KMA* regularly?

YES	93%
NO	5%
SOMETIMES	2%

2. Do you find the quality of the scientific articles adequate?

YES	75%
NO	12.5%
SOMETIMES	12.5%

3. Do the scientific articles relate to your interests as a Kentucky physician?

YES	68%
NO	18%
SOMETIMES	14%

4. Do you feel the advertising is helpful?

YES	63%
NO	32%
SOMETIMES	5%

5. Do you share the *Journal* with colleagues, friends or family?

YES	20%
NO	80%

6. Are you aware of any improvement in overall design of the *Journal?*

YES	63%
NO	37%

7. Do you read the Association Section of the *Journal?*

YES	70%
NO	25%
SOMETIMES	5%

8. Do you use the Postgraduate Opportunities calendar?

YES	37%
NO	63%

9. Do you read the special features in the *Journal?*

YES	83%
NO	15%
SOMETIMES	2%

10. Do you have any suggestions on how the *Journal* can be improved?

YES	18%
NO	65%
SOMETIMES	17% (See attached.)

- "Good for local society news—but not comparable to many of the 'throw away journals' re: Clinical Problems, etc."
- "Add—Letters to the Editor Section"
- "Reproduction of x-ray negatives are inadequate."
- "Series of review articles on specific areas with recent changes or controversies."
- "Serves its purpose well."
- "Much more attractive now than in recent past—very well satisfied with it."
- "Two good scientific review articles each month."
- "More involvement by practicing MD's."
- "I enjoy reading the Journal."
- "I look forward to the Journal every month."

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OFTEN INSEPARABLE: PAIN AND ANXIETY

A pathologic partnership one sees every day

Pain—triggering anxiety—which accentuates the perception of pain...together they're worse than either alone. And since they're usually both present in musculoskeletal disorders, the best therapy is often a combination of analgesic and anxiolytic agents. Equagesic®-M combines the pain relief of aspirin with the tension-reducing properties of meprobamate—because together they're better than either alone.

See important information on next page.

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tablets

Equagesic®-M

(meprobamate with aspirin) Ⓒ Wyeth

Effective analgesic/anxiolytic alliance





Prompt, effective relief from the dual burden of pain and anxiety

tablets

Equagesic®-M

(meprobamate with aspirin) ℗ Wyeth

Effective analgesic/anxiolytic alliance

Proven superior to aspirin alone in controlled clinical trials

(BRIEF SUMMARY)

DESCRIPTION: Each tablet contains 200 mg meprobamate and 325 mg aspirin.

INDICATIONS: Adjunct in short-term treatment of pain accompanied by tension and/or anxiety in patients with musculoskeletal disease. Clinical trials demonstrated in these situations relief of pain is somewhat greater than with aspirin alone. Effectiveness in long-term use, i.e. over 4 months, has not been assessed by systematic clinical studies. Physicians should periodically reassess usefulness of drug for individual patients.

CONTRAINDICATIONS: ASPIRIN: Allergic or idiosyncratic reactions to aspirin or related compounds. MEPROBAMATE: Acute intermittent porphyria, allergic or idiosyncratic reactions to meprobamate or related compounds, e.g. carisoprodol, mebutamate, or carbromal.

WARNINGS: ASPIRIN: Use salicylates with extreme caution in patients with peptic ulcer, asthma, coagulation abnormalities, hypoprothrombinemia, vitamin K deficiency, or those on anticoagulants. In rare instances, aspirin in persons allergic to salicylates may result in life-threatening allergic episodes.

MEPROBAMATE: DRUG DEPENDENCE: Physical and psychological dependence, and abuse have occurred. Chronic intoxication from prolonged ingestion of, usually, greater than recommended doses is manifested by ataxia, slurred speech, and vertigo. Therefore, carefully supervise dose and amounts prescribed and avoid prolonged use, especially in alcoholics and others with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of preexisting symptoms, e.g. anxiety, anorexia, or insomnia, or withdrawal reactions, e.g. vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and, rarely, convulsive seizures. Such seizures are more likely in persons with CNS damage or preexistent or latent convulsive disorders. Onset of withdrawal symptoms occurs usually within 12 to 48 hours after discontinuation; symptoms usually cease within next 12-to-48-hour period. When excessive dosage has continued for weeks or months, reduce dosage gradually over 1 to 2 weeks rather than stop abruptly. Alternatively, a short-acting barbiturate may be substituted, then gradually withdrawn.

POTENTIALLY HAZARDOUS TASKS: Warn patients meprobamate may impair mental or physical abilities required for potentially hazardous tasks, e.g., driving or operating machinery.

ADDITIVE EFFECTS: Since CNS-suppressant effects of meprobamate and alcohol or meprobamate and other psychotropic drugs may be additive, exercise caution with patients taking more than one of these agents simultaneously.

USAGE IN PREGNANCY AND LACTATION: An increased risk of congenital malformations associated with minor tranquilizers (meprobamate, chlordiazepoxide, and diazepam) during first trimester of pregnancy, has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. The possibility that a woman of childbearing potential may be pregnant at time of institution of therapy should be considered. Advise patients if they become pregnant during therapy or intend to become pregnant to communicate with their physicians about desirability of discontinuing the drug.

Meprobamate passes the placental barrier. It is present both in umbilical cord blood at or near maternal plasma levels and in breast milk of lactating mothers at concentrations two to four times that at maternal plasma. When use of meprobamate is contemplated in breastfeeding patients, consider the drug's higher concentrations in breast milk as compared to maternal plasma levels.

USAGE IN CHILDREN: Keep preparations with aspirin out of reach of children. Equagesic®-M is not recommended for patients 12 years of age and under.

PRECAUTIONS: ASPIRIN: Salicylates antagonize uricosuric activity of probenecid and sulfinpyrazone. Salicylates are reported to enhance hypoglycemic effect of sulfonylurea antidiabetics.

MEPROBAMATE: Use lowest effective dose, particularly in elderly and/or debilitated, to preclude over-sedation. Meprobamate is metabolized in the liver and excreted by the kidney, to avoid excess accumulation exercise caution in its use in patients with compromised liver or kidney function. Meprobamate occasionally may precipitate seizures in epileptic patients. It should be prescribed cautiously and in small quantities to patients with suicidal tendencies.

ADVERSE REACTIONS: ASPIRIN: May cause epigastric discomfort, nausea, and vomiting. Hypersensitivity reactions, including urticaria, angioneurotic edema, purpura, asthma, and anaphylaxis may rarely occur. Patients receiving large doses of salicylates may develop tinnitus.

MEPROBAMATE: CNS: Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impairment of visual accommodation, euphoria, overstimulation, paradoxical excitement, fast EEG activity.

GI: Nausea, vomiting, diarrhea.

CARDIOVASCULAR: Palpitation, tachycardia, various forms of arrhythmia, transient ECG changes, syncope, hypotensive crisis.

ALLERGIC OR IDIOSYNCRATIC: Milder reactions are characterized by itchy, urticarial, or erythematous maculopapular rash, generalized or confined to the groin. Other reactions include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy, fever, fixed drug eruption with cross-reaction to carisoprodol, and cross-sensitivity between meprobamate: mebutamate and meprobamate: carbromal. Rare, more severe hypersensitivity reactions include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, and anuria. Also, anaphylaxis, exfoliative dermatitis, stomatitis, and proctitis. Stevens-Johnson syndrome and bullous dermatitis have occurred.

HEMATOLOGIC (SEE ALSO "ALLERGIC OR IDIOSYNCRATIC"): Agranulocytosis, aplastic anemia have been reported, although no causal relationship has been established, and thrombocytopenic purpura.

OTHER: Exacerbation of porphyric symptoms.

DOSAGE AND ADMINISTRATION: Usual dose is one or two tablets, 3 to 4 times daily as needed for relief of pain when tension or anxiety is present. Not recommended for patients 12 years of age and under.

OVERDOSAGE: Treatment is essentially symptomatic and supportive. Any drug remaining in the stomach should be removed. Induction of vomiting or gastric lavage may be indicated. Activated charcoal may reduce absorption of both aspirin and meprobamate. Aspirin overdosage produces usual symptoms and signs of salicylate intoxication. Observation and treatment should include management of hyperthermia, specific parenteral electrolyte therapy for ketoacidosis and dehydration, watching for evidence of hemorrhagic manifestations due to hypoprothrombinemia which, if it occurs, usually requires whole-blood transfusions. Suicidal attempts with meprobamate have resulted in drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Same suicidal attempts have been fatal. The following data, reported in the literature and from other sources, are not expected to correlate with each case (considering factors such as individual susceptibility and length of time from ingestion to treatment), but represent usual ranges reported. Acute simple overdose (meprobamate alone): Death has been reported with ingestion of as little as 12 gram meprobamate and survival with as much as 40 gram.

BLOOD LEVELS:

0.5-2.0 mg percent represents usual blood-level range after therapeutic doses. The level may occasionally be as high as 3.0 mg percent.

3-10 mg percent usually corresponds to findings of mild-to-moderate symptoms of overdosage, such as stupor or light coma.

10-20 mg percent usually corresponds to deeper coma, requiring more intensive treatment. Some fatalities occur.

At levels greater than 20 mg percent, more fatalities than survivals can be expected.

Acute combined overdose (meprobamate with other psychotropic drugs or alcohol): Since effects can be additive, history of ingestion of a low dose of meprobamate plus any of these compounds (or of a relatively low blood or tissue level) cannot be used as a prognostic indicator.

In cases of excessive doses, sleep ensues rapidly and blood pressure, pulse, and respiratory rates are reduced to basal levels. Any drug remaining in stomach should be removed and symptomatic treatment given. Should respiration or blood pressure become compromised, respiratory assistance, CNS stimulants, and pressor agents should be administered cautiously as indicated. Diuresis, osmotic (mannitol) diuresis, peritoneal dialysis, and hemodialysis have been used successfully in removing both aspirin and meprobamate. Alkalinization of the urine increases excretion of salicylates. Careful monitoring of urinary output is necessary, and caution should be taken to avoid overhydration.

Relapse and death, after initial recovery, have been attributed to incomplete gastric emptying and delayed absorption.

HOW SUPPLIED: Bottles of 50 scored tablets.

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Wyeth Laboratories
Philadelphia Pa 19101

IN MEMORIAM

HORACE B. PENDLETON, M.D.
Owensboro
1922-1982

Horace B. Pendleton, M.D., died in October of 1982. Doctor Pendleton was a specialist in internal medicine. He was a 1950 graduate of the University of Louisville School of Medicine and had been a member of the KMA since 1953.

HENRY BOYD CAUDILL, M.D.
Lawrenceburg
1905-1983

Henry Boyd Caudill, M.D., died January 19, 1983. Doctor Caudill was a retired obstetrician and gynecologist who had practiced in Lawrenceburg. He was a 1932 graduate of the University of Louisville School of Medicine and had been a member of KMA since 1943.

WILLIAM C. ROLAND, M.D.
Ashland
1915-1982

William C. Roland, M.D., died January 18, 1983. Doctor Roland was a retired orthopedic surgeon. He was a 1942 graduate of the University of Southern California School of Medicine and had been a member of KMA since 1954 having served on the Physical Medicine and Rehabilitation Committee of KMA.

J. BATES HENDERSON, M.D.
Berea
1899-1983

J. Bates Henderson, M.D., died January 3, 1983. He had practiced medicine in Berea until his retirement in 1967. Doctor Henderson was a 1929 graduate of the University of Cincinnati School of Medicine and had been a member of KMA since 1949.

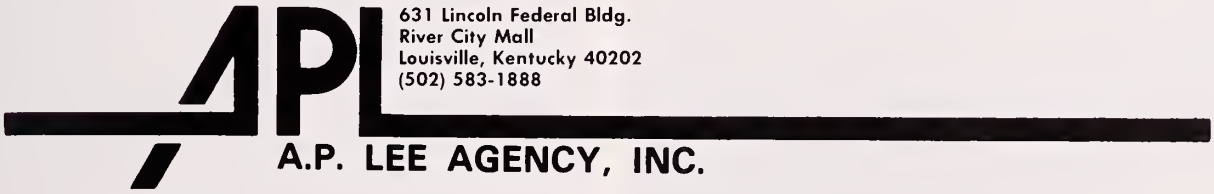
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KMA Headquarters Building Addition

The building addition at the KMA Headquarters Office is taking shape with the date of completion expected in July. The 10,000 square foot addition will house offices for the expanding Kentucky Medical Insurance Company and the Kentucky Medical Licensure Board.

KMA will also be expanding its services in the form of a credit union. It was announced in February that the KMA Physicians Financial Services, A Federal Credit Union, was approved and granted a charter by the National Credit Union Administration. KMA is the first state medical association to develop and institute a Federal Credit Union for members and their employees. More information will be forthcoming.



Ground breaking, November 1982. From left to right: Bob Stitch, construction foreman; Carl L. Wedekind, Jr., President and Chief Executive Officer KMIC; Robert G. Cox, KMA Executive Vice President; Richard F. Hench, M.D., Chairman, KMA Board of Trustees and Dwight L. Blackburn, M.D., President KMA.



December 1982



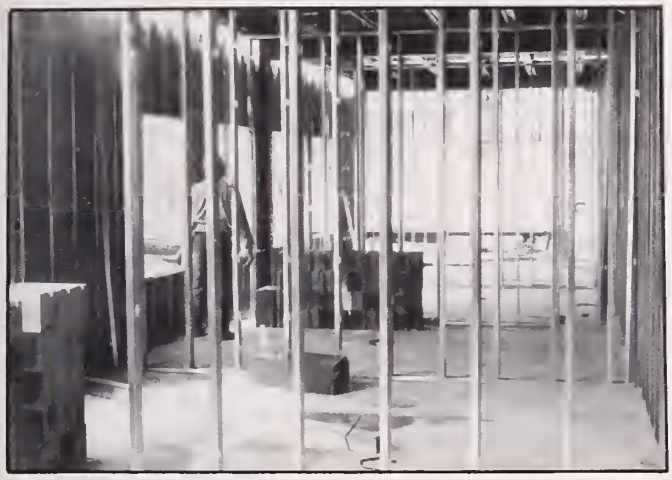
January 1983



February 1983



February 1983



March 1983



March 1983



March 1983



March 1983

CLASSIFIED

All advertisements must be approved by the Board of Editors. Deadline is the first of the month preceding the month of publication.

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Family Practitioner wanted for associate. Newly remodeled building to accommodate two physicians in large one man's solo practice, located adjacent to 52 bed hospital.

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References: 1. Kales A *et al: J Clin Pharmacol 17*:207-213, Apr 1977 and data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Kales A: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **4.** Kales A *et al: JAMA 241*:1692-1695, Apr 20, 1979. **5.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 15, 1978. **6.** Kales A *et al: Clin Pharmacol Ther 19*:576-583, May 1976. **7.** Kales A, Kales JD: *Pharmacol Physicians 4*:1-6, Sep 1970. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Dement WC *et al: Behav Med 5*:25-31, Oct 1978. **10.** Vogel GW: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **11.** Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington, DC, May 3-7, 1971. **12.** Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytime sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. **13.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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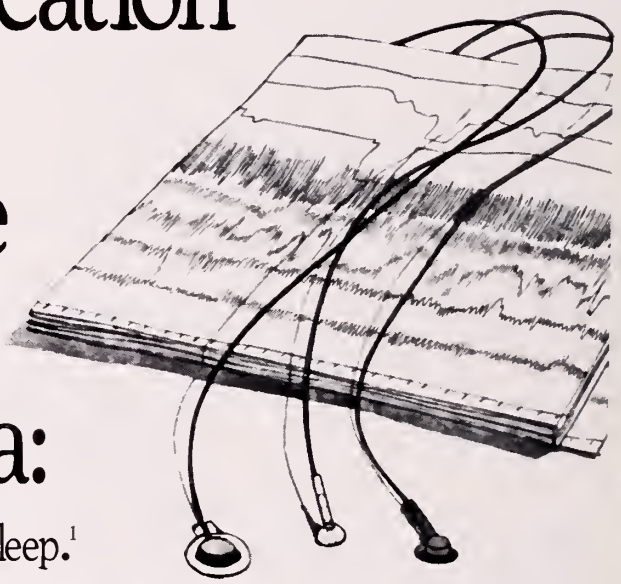
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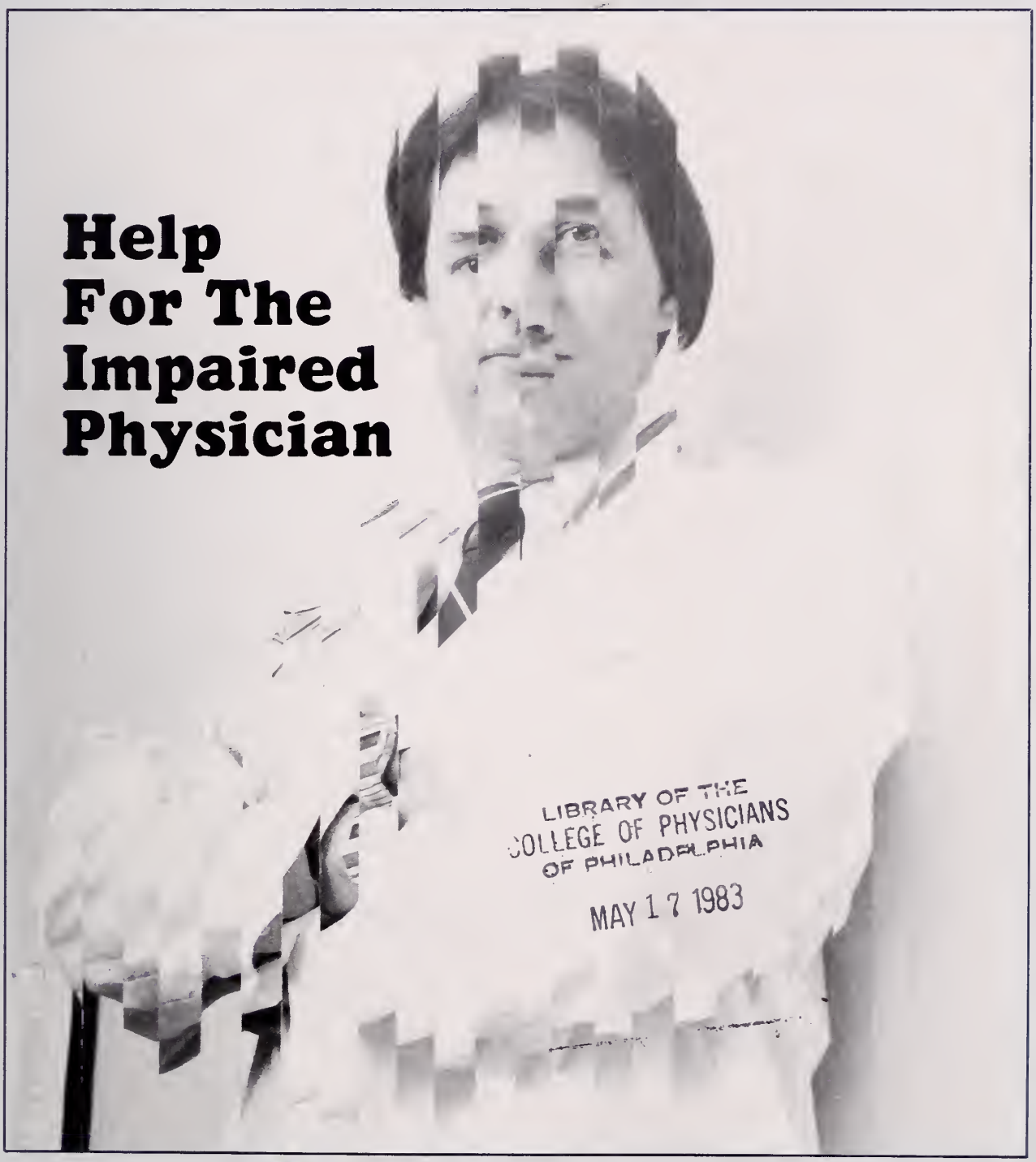
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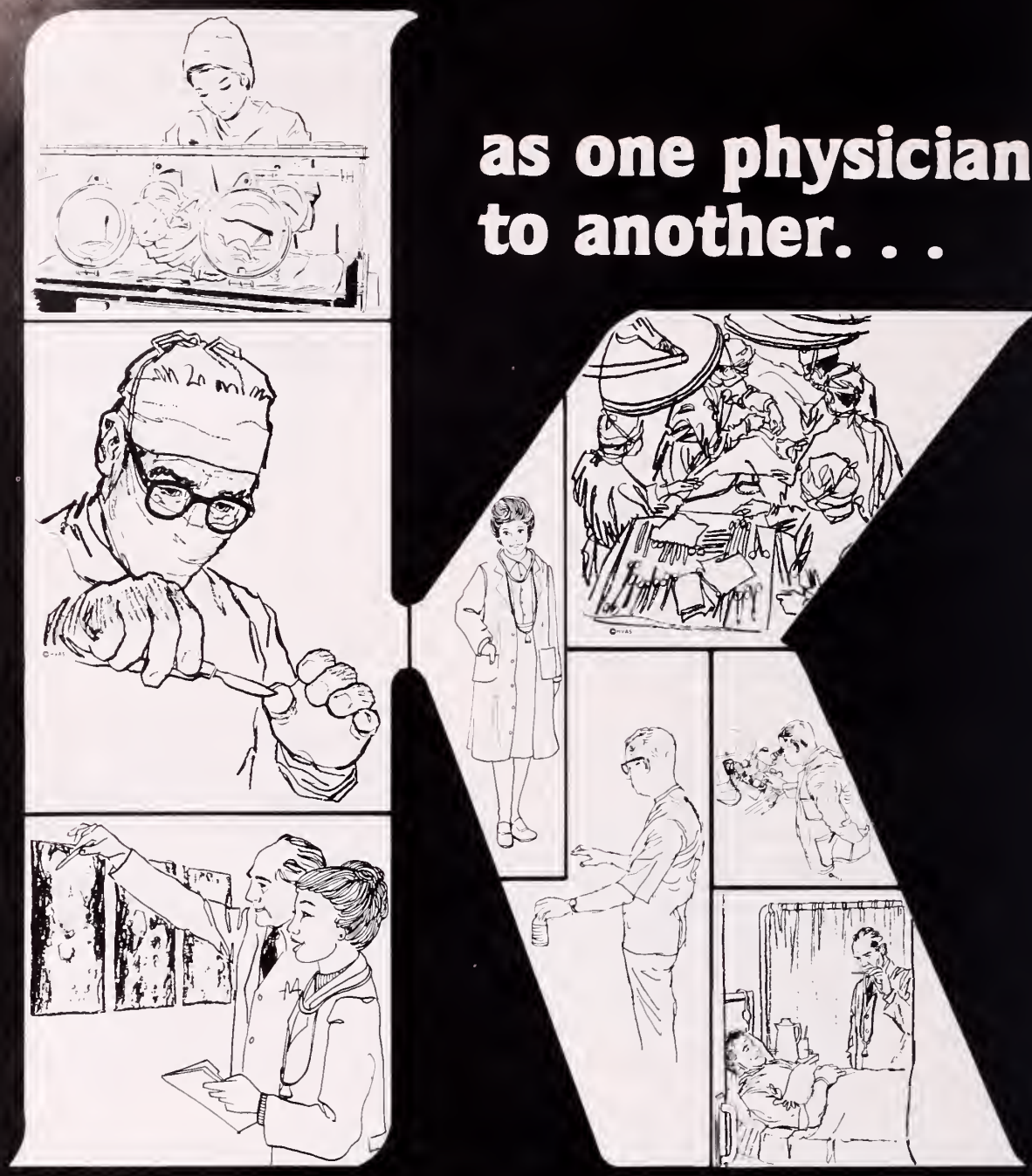
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PRESIDENT'S PAGE



Medical Care Costs

PHYSICIANS are often accused of causing the price of health care to skyrocket. Physician fees have increased, of course, along with every other facet of health care delivery. In 1970, physicians' fees comprised 19.1% of the $74.1 billion health care expenditure. But in 1980, physicians' fees constituted only 18.9% of the $247 billion spent on health care. Physicians certainly must bear part of the responsibility for health care costs but they don't realize all the monetary benefits some publicists claim.

What factors affect the cost of health care? The largest contributor is inflation. It is estimated inflation alone is responsible for 60% of the increase in health care costs of the past decade. Inflation, however, cannot be blamed entirely.

Overutilization of the health care system is a major cost factor. Up to 80% of hospital emergency room visits are unwarranted, but the public continues to seek routine medical care at an emergency room, rather than through a private physician's office.

Compliance with government-imposed regulations commands a high price. In 1977, the American Hospital Association monitored the implementation of eight specific regulations mandated by the federal government, and found the cost was a staggering $863 million. By 1979, the figure had risen to $1 billion. It has been concluded that $38.86 of each patient's daily bill can be directly related to fulfilling regulatory requirements.

There is no way to accurately measure how much medical liability insurance premiums have added to the annual cost of health care. The best estimate is that an extra $5 per day is added to a patient's bill, and three to four dollars to the cost of an office visit to balance the increase in rates physicians must pay for premiums, which will total nearly $1 billion this year.

Health insurance rates increased 30 to 40% in 1981, attributed primarily to increased hospital rates. Hospitals counter that they are also faced with spiralling inflation and increased labor costs. Nearly one-half of an average hospital's budget is spent on its payroll.

Also to be considered is the fact that people are living longer, requiring more care, and in many cases, more expensive care. People 65 years of age and older visit their doctor four times as often as people under 65. The aged and institutionalized account for 80% of the $20 billion spent for catastrophic illness annually, according to the U. S. Department of Health and Human Services.

Some increases in cost stem from a positive force—advancement in medical technology. These costs must be absorbed unless patients would be willing to forfeit coronary bypass operations, hip replacements, pacemakers, fetal monitoring, microsurgery, ultrasound, organ transplants, CT scanners, and renal dialysis.

Instead of merely becoming defensive when accused of getting rich at the expense of the sick, physicians should try to educate the public that they also have a responsibility for keeping the cost of health care at affordable levels. We can inform our patients that it is a myth that insurance-reimbursed services don't cost them anything.

We can encourage them to adopt healthier lifestyles. We can point out that smoking alone accounts for 80% of chronic lung diseases leading to 350,000 premature deaths every year. Elimination of smoking would decrease the cost of medical care by 11%. Alcohol abuse contributes another 10% to the health care dollar.

According to federal estimates, illness and accidents caused by self-destructive lifestyles accounted for more than half of the $247 billion spent on health care in this country in 1980. That should give us all something to think about.

Dwight L. Blackburn, M.D.
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Brief Summary of Prescribing Information.

Indications and Usage: Management of anxiety disorders or short-term relief of symptoms of anxiety or anxiety associated with depressive symptoms. Anxiety or tension associated with stress of everyday life usually does not require treatment with an anxiolytic.

Effectiveness in long-term use, i.e., more than 4 months, has not been assessed by systematic clinical studies. Reassess periodically usefulness of the drug for the individual patient.

Contraindications: Known sensitivity to benzodiazepines or acute narrow-angle glaucoma

Warnings: Not recommended in primary depressive disorders or psychoses. As with all CNS-acting drugs, warn patients not to operate machinery or motor vehicles, and of diminished tolerance for alcohol and other CNS depressants.

Physical and Psychological Dependence: Withdrawal symptoms like those noted with barbiturates and alcohol have occurred following abrupt discontinuance of benzodiazepines (including convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Addiction-prone individuals, e.g. drug addicts and alcoholics, should be under careful surveillance when on benzodiazepines because of their predisposition to habituation and dependence. Withdrawal symptoms have also been reported following abrupt discontinuance of benzodiazepines taken continuously at therapeutic levels for several months.

Precautions: In depression accompanying anxiety, consider possibility for suicide.

For elderly or debilitated patients, initial daily dosage should not exceed 2mg to avoid oversedation. Terminate dosage gradually since abrupt withdrawal of any antianxiety agent may result in symptoms like those being treated: anxiety, agitation, irritability, tension, insomnia and occasional convulsions. Observe usual precautions with impaired renal or hepatic function. Where gastrointestinal or cardiovascular disorders coexist with anxiety, note that lorazepam has not been shown of significant benefit in treating gastrointestinal or cardiovascular component. Esophageal dilation occurred in rats treated with lorazepam for more than 1 year at 6mg/kg/day. No effect dose was 1.25mg/kg/day (about 6 times maximum human therapeutic dose of 10mg/day). Effect was reversible only when treatment was withdrawn within 2 months of first observation. Clinical significance is unknown; but use of lorazepam for prolonged periods and in geriatrics requires caution and frequent monitoring for symptoms of upper G.I. disease. Safety and effectiveness in children under 12 years have not been established.

ESSENTIAL LABORATORY TESTS: Some patients have developed leukopenia; some have had elevations of LDH. As with other benzodiazepines, periodic blood counts and liver function tests are recommended during long-term therapy.

CLINICALLY SIGNIFICANT DRUG INTERACTIONS: Benzodiazepines produce CNS depressant effects when administered with such medications as barbiturates or alcohol.

CARCINOGENESIS AND MUTAGENESIS: No evidence of carcinogenic potential emerged in rats during an 18-month study. No studies regarding mutagenesis have been performed.

PREGNANCY: Reproductive studies were performed in mice, rats, and 2 strains of rabbits. Occasional anomalies (reduction of tarsals, tibia, metatarsals, malrotated limbs, gastroschisis, malformed skull and microphthalmia) were seen in drug-treated rabbits without relationship to dosage. Although all these anomalies were not present in the concurrent control group, they have been reported to occur randomly in historical controls. At 40mg/kg and higher, there was evidence of fetal resorption and increased fetal loss in rabbits which was not seen at lower doses. Clinical significance of these findings is not known. However, increased risk of congenital malformations associated with use of minor tranquilizers (chlordiazepoxide, diazepam and meprobamate) during first trimester of pregnancy has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, use of lorazepam during this period should almost always be avoided. Possibility that a woman of child-bearing potential may be pregnant at institution of therapy should be considered. Advise patients if they become pregnant to communicate with their physician about desirability of discontinuing the drug. In humans, blood levels from umbilical cord blood indicate placental transfer of lorazepam and its glucuronide.

NURSING MOTHERS: It is not known if oral lorazepam is excreted in human milk like other benzodiazepines. As a general rule, nursing should not be undertaken while on a drug since many drugs are excreted in milk.

Adverse Reactions, if they occur, are usually observed at beginning of therapy and generally disappear on continued medication or on decreasing dose. In a sample of about 3,500 anxious patients, most frequent adverse reaction is sedation (15.9%), followed by dizziness (6.9%), weakness (4.2%) and unsteadiness (3.4%). Less frequent are disorientation, depression, nausea, change in appetite, headache, sleep disturbance, agitation, dermatological symptoms, eye function disturbance, various gastrointestinal symptoms and autonomic manifestations. Incidence of sedation and unsteadiness increased with age. Small decreases in blood pressure have been noted but are not clinically significant, probably being related to relief of anxiety.

Overdosage: In management of overdosage with any drug, bear in mind multiple agents may have been taken. Manifestations of overdosage include somnolence, confusion and coma. Induce vomiting and/or undertake gastric lavage followed by general supportive care, monitoring vital signs and close observation. Hypotension, though unlikely, usually may be controlled with Levarterenol Bitartrate Injection U.S.P. Usefulness of dialysis has not been determined.

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2-4 1st Symposium on Behavioral Neurology: Higher Cortical Functions and the Brain, Vanderbilt University School of Medicine, Nashville, TN

8-10 12th Update in OB-GYN, Hyatt Regency Hotel, Lexington

8-10 Eighth Annual Conference on Clinical Application of Hyperbaric Oxygen, Memorial Hospital Medical Center, Center for Health education, Long Beach, California

9-10 Southern Medical Association, Medical Malpractice Seminar, Houston, Texas

16-17 Southern Medical Association, Medical Staff Leadership Seminar, Kansas City, Missouri

17 Problem Solving in Cardiovascular Disease for the Primary Care Physician, University of Louisville, Health Sciences Center

19-20 Long Island Jewish-Hillside Medical Center, VASCULAR SURGERY 1983, Current Status of the Art (International Vascular Symposium), The New York Hilton at Rockefeller Center, New York, NY

JULY

19-23 Vanderbilt University, Sixth Annual Symposium on Contemporary Clinical Neurology, Hilton Head Island, SC

AUGUST

5-6 Bethesda Hospital and Deaconess Association, Second Annual Hands-On Anterior/Posterior Vitrectomy Workshop, The Terrace Hilton Hotel, Cincinnati, OH

17-21 American Professional Practice Association, Timely Economic & Tax Savings Seminar for Doctors, Walt Disney World, Florida

19-21 Southern Medical Association, Regional Postgraduate Conferences, San Antonio, Texas

26-28 Southern Medical Association, Medical Malpractice Seminar, Hot Springs, Virginia

SEPTEMBER

7-10 13th Annual Peripheral Vascular Disease Symposium, University Hilton Inn, Columbus, OH

19-22 KMA Annual Meeting, Ramada Inn/Bluegrass Convention Center, Louisville

OCTOBER

8-16 Eighth Annual International Body Imaging Conference, Maui Surf Hotel, Maui, Hawaii

13-14 Southern Medical Association, Medical Malpractice Seminar, Washington, D.C.

NOVEMBER

4-5 Bethesda Hospital and Deaconess Association, Cincinnati Cancer Conference: G. I. Malignancies, The Westin Hotel, Cincinnati, OH

6-9 Southern Medical Association, Regional Postgraduate Conferences, Baltimore, Maryland

6-9 Southern Medical Association, Annual Scientific Assembly, Baltimore, Maryland

Rheumatoid Arthritis

THOMAS D. BROWER, M.D., JOHN C. SIMMONS, M.S.W., CAROLYN BACDAYAN, M.A., D. KAY CLAWSON, M.D. and H. THOMAS WIEGERT, M.D. (Moderator)

The following article is an edited transcript from the Integrative Clinicopathological Conference, University of Kentucky, College of Medicine, February 3, 1982

Doctor H. Thomas Wiegert, Chairman, Department of Family Practice (Moderator):

Rheumatoid arthritis is a disease which has appeared relatively recently in man's history, having been known for only two or three centuries. It is a systemic, autoimmune disease characterized by a chronic proliferative and inflammatory reaction in the synovial membrane which eventually results in the erosion and destruction of the joint cartilage. The synovial tissues are clearly the villains in this disease; what happens in the joints is secondary to what happens in the synovial tissues. The disease primarily afflicts young adults, with a marked female predominance of about three to one; approximately 2½% of all Americans have rheumatoid arthritis, and of those with the disease, the incidence of permanent disability is about 10%.

Today we are pleased to present a case study in the successful management of this chronic disease process. The patient we will be discussing has a great deal of pride and high self esteem. She lives in a milieu characterized by a very supportive family and a supportive community, and she has had the good fortune of being treated by a competent, caring, and compassionate physician, Thomas D. Brower, M.D., who has had an ongoing relationship with her and her family.

I would like to introduce the individuals we have assembled today to discuss this case. Doctor Brower, Chief, Division of Orthopedic Surgery, Department of Surgery, will present the medical history. John C. Simmons, Director of Social Work at the University Hospital, will present the social history, and Carolyn Bacdayan, Director of Planning, University Hospital, will offer an economic analysis. Finally, D. Kay Clawson, M.D., Dean of the College of Medicine, will serve as discussor.

Dr. Thomas D. Brower, Chief, Division of Orthopedic Surgery: The medical history of this patient illustrates the chronic nature of rheumatoid arthritis. The patient is now approximately 34 years of age. She first experienced difficulties with her joints at the age of five, at which time she was rather incapacitated for several months with multiple joint swellings and pain. The diagnosis was rheumatoid arthritis or rheumatic fever; since she was not a patient at the University of Kentucky Medical Center at that time, we lack more definite information. The patient had a remission and did quite well until she was around 18 or 19-years-old and was in her third trimester with her second child. During this pregnancy she had an exacerbation of joint swelling which is very uncommon for this disease. As you may know, the effectiveness of cortisone in the treatment of rheumatoid arthritis was discovered as a result of the observation that women with rheumatoid arthritis improved significantly during pregnancy. It was thought that the secretion of cortisone during pregnancy was responsible for that improvement; with this patient, however, the opposite occurred.

I first saw the patient around 1967. She was then being treated by a rheumatologist. The exacerbation of her disease had progressed until the joints of her hands were so sore and stiff and swollen that she could hardly use them. Her knees were terribly swollen, her feet and ankles were painful, and she was actually bedridden. Despite medical treatment she experienced little relief, and her physician asked me to do a biopsy of her knees. In addition to the biopsy, I performed an anterior synovectomy of both knees and removed the synovial membrane.

To better understand this devastating disease, we must first understand the normal anatomy of the human joint. The bones comprising a joint are surfaced by cartilage, a smooth glistening substance. This tissue has no blood vessels and is very firm, yet has some resilience. The joint cavity is contained by an encompassing capsule, the inner surface of which is lined by a synovial membrane. This latter lining is only a few cells thick, and under normal circumstances small blood vessels can be seen through it. The synovial membrane secretes a slippery fluid which lubricates the joint and nourishes the cartilage covering the articulating bones.

Rheumatoid arthritis makes a villain out of the normally benevolent synovial membrane. At the time of surgery on this patient, the synovial membrane was found to be thickened to 1 cm., beefy red in color, and growing over the margins of the articular cartilage. Left undisturbed, this inflamed synovial membrane would eventually destroy the cartilage and ligaments and thus the joint function. In order to relieve the patient's pain and hopefully preserve the function of her knee joints, all of the synovial membrane was removed from the anterior part of her knee joints. Following such a procedure, within a few weeks, a more normal synovial membrane regenerates which, oddly enough, is rather resistant to exacerbations of the disease.

About a year or so later, the patient experienced bilateral hip ankylosis with stiffness and pain. We performed an old-fashioned operation called a subtrochanteric osteotomy; in this operation, the femur is cut in two just below the hip joint and fixed with a piece of metal, after which the patient is gotten up and started walking. This operation has relieved the condition in a certain number of patients, although I have never figured out why. This patient did quite well for almost 12 years after this procedure as far as her hips were concerned.

In 1972, the patient began to have difficulties with her hands when she ruptured some tendons that extended her fingers, a common complication in rheumatoid arthritis. Her metacarpal phalangeal joints in her knuckles were becoming dislocated. We operated on her hands, repaired her tendons, and put some artificial joints in her knuckles. About six months later her wrist was dislocating, so we fused it. Then she did well for about another six to eight years.

Last summer the patient returned suffering from bilateral stiffness of the hips which was quite incapacitating. She indicated that she was no longer able to take care of herself, that she could not even put on her socks and shoes. X-ray examination revealed that the left hip joint had survived quite well; although not normal it showed some articular cartilage space. The right hip, however, showed no cartilage and it appeared that the bone of the head of the femur was rubbing against the bone of the acetabulum. By this time a new surgical procedure called total hip replacement had been developed. In this procedure the hip joint, the head and neck of the femur, are removed and replaced on both sides, the acetabulum as well as the femoral side, with artificial components. The acetabular component is acrylic and is cemented into the acetabulum after this area has been reamed of any residual cartilage or fibrous material. The femoral shaft is filled with a methyl/methacrylate cement, and the shaft of the femoral component is driven down the middle of it. It takes about 10 minutes for the cement to set. The joint is reduced and the wound closed. Since the operation the patient has been able to return to work and resume her normal activities.

Dr. Wiegert: John Simmons will now discuss the social history of this patient.

John C. Simmons, Director of Social Work, University Hospital: The patient is 34-years-old, and has two teen-age children. She lives in a small town in Kentucky and must travel eight hours round trip every time she wants to see her physician.

The patient's home was constructed for the family in the last few years and they are very proud of it. It is very attractive on the inside. There is no ramp; as far as possible, the patient is not allowing her disease to disrupt her life. Several members of the patient's husband's family as well as the sister of the patient live on the same block.

When we interviewed the patient, her husband came home from work to visit with us. The patient herself works a 40-hour week, swing shift, on a job requiring considerable responsibility and decision making. Economically, as is the case with many people today, they are having difficulty making ends meet: the husband works a part-time job, the patient occasionally does some baby-sitting.

As Doctor Brower indicated, the patient has rheumatoid arthritis, with the onset of the disease occuring during her second pregnancy. We questioned her about

TABLE 1:
TOTAL COST OF THE PATIENT'S HOSPITALIZATION
AT THE UNIVERSITY OF KENTUCKY MEDICAL CENTER

Year	Days of Hospitalization	Cost per Patient Day	Total Cost	Total Cost in 1981 Constant Dollars*
1967	32 days	$ 61.47	$ 1,967	$ 5,941
1969	24 days	75.54	1,789	4,796
1970	13 days	87.22	1,134	2,832
1974	19 days	98.91	1,879	3,666
1975	6 days	116.94	702	1,246
1981-June	4 days	318.36	1,273	1,273
1981-July	13 days	361.71	4,702	4,702
	111 days		$13,446	$24,456

*Based on medical component of CPI, 1966 = base year

the experience of having the disease diagnosed at that stage. Throughout the interview, any questions about what things were like 12 or 15 years ago required a great deal of effort on their parts. They appeared more future-oriented than concerned with the past. This attitude is uncharacteristic of rheumatoid arthritis patients.

During the first six years of the patient's illness her husband was unable to find work locally. He worked a variety of jobs in other states during this period, coming home when he could on weekends and vacations. The patient went to live with her parents who helped to raise the children. At the end of six years the husband was able to find work and returned home.

Both the patient and her husband indicate that after the first five years, things improved. The patient did not recall any unusual discipline problems with the children, despite being wheelchair-bound or bedridden for a large part of the time. She developed methods of coping with typical child-raising tasks such as changing diapers (which the patient did lying on the bed beside her baby).

Thus, the patient exhibits a remarkable ability to cope with her situation. In addition to working full-time, she is a gourmet cook. From discussions about her family, it was apparent that despite her disease she was still able to provide a normal home environment. We asked if she was able to get out and attend school functions for the children. She replied that she was not able to do so as often as she would like—not because of the arthritis, but because of the swing shift.

The patient has been very pleased with and has great confidence in Doctor Brower and the University of Kentucky Medical Center. This has greatly facilitated her treatment. When her physician feels something needs to be done, she has complete confidence in the treatment and in the outcome. She is even looking forward to her next operation, as she expects that it will result in decreased pain and increased mobility, as happened with her first hip replacement.

The patient is on indocin (25 mg) a day at the cost of five dollars for 20 pills. In the initial stages medical assistance covered her chief medical expenses. Vocational rehabilitation picked up a number of these expenses during her rehabilitation to return to work. In the last few years, her husband's Blue Cross has taken care of most of her medical bills.

In summary, what we have here is not a typical rheumatoid arthritis patient. The patient has a strong drive to be independent. When asked how she coped, her comments included, "I never give up," "I do what I have to," "You just make the best of it." "We just learned to live with it." The strength and support of the patient's husband cannot be overlooked, either. He is certainly not the typical spouse of a rheumatoid arthritis patient who deserts his wife within three to five years of the onset of the disease. On the other hand, for the first six years he was not geographically present full-time; we are not sure of the total effect of this on the relationship. Certainly, however, the husband's attitude is not one of fostering dependency as is so often the case. We saw him, rather, as a strong male, quite assured and confident, who encouraged his wife to be independent, and who was willing to undertake whatever was necessary to enable his wife to get better.

In conclusion, I would say that this is a remarkable patient with a strong, healthy attitude. She has probably been a lot easier to take care of because of her attitude that "I'm going to do whatever it takes, but I'm going to get better."

Dr. Wiegert: Carolyn Bacdayan will now present an economic analysis of the costs involved in the treatment of a patient with rheumatoid arthritis.

Carolyn Bacdayan, Director of Planning, University Hospital: There are two major points I would like to make. One has to do with the total costs of hospitalization over time for this patient in the treatment of her rheumatoid arthritis. The second concerns the comparative costs between the University of Kentucky as a teaching hospital and what the costs might have been in a community setting.

This patient has had eight hospitalizations in the past fourteen years at the University of Kentucky Medical Center, for a total of 111 days (Table 1). In today's dollars that has amounted to almost $25,000. From John Simmons' description, we would probably consider that to be a worthwhile investment, both personally and socially, given the patient's rehabilitation.

It is interesting to compare the cost per patient day in 1967 with what it is today. In the interim, there has been almost a six-fold increase in per diem costs. While in 1969, twenty-four days of hospitalization cost the patient almost $5,000, in 1981 the same amount of money in "constant dollars" (adjusted for inflation) would cover only about half of that stay. This clearly illustrates the continuously escalating costs of medical care.

The second area of interest concerns the comparative costs of teaching hospitals vis-a-vis community settings. It is generally acknowledged that teaching hospitals are more expensive places to receive medical care. There has been considerable discussion in the national arena about how teaching hospitals can be made more competitive with the private sector. This appears to be the handwriting on the wall if teaching hospitals are going to be able to survive. In a recent study conducted by the Kentucky Council on Higher Education, it was found that the costs at the University of Kentucky and the University of Louisville teaching hospitals were approximately 18% higher than those at comparable hospitals in the state with an equivalent mix of patients, personnel and types of services. However, when comparing the University of Kentucky with university-owned, state-supported hospitals in 16 other eastern and southeastern states, the latter were found to have costs which were 42% higher than comparable community hospitals in the same geographic region. So, it would appear that both the University of Kentucky and the University of Louisville are actually doing a much better job than teaching hospitals in these surrounding states.

If we look at this particular surgical procedure, total hip replacement, as a microcosm of the health care system to check out this generalization, we see that the cost for the total hospitalization of this patient at the University of Kentucky was, in fact, less than the average cost for this procedure across the state in 1981 (Table 2). Physician and anesthesia costs are usual and customary, and physicians at the University of Kentucky are paid on the same basis as other physicians practicing in the private sector. The average cost per day for the patient's stay at the Medical Center was only 9% higher than the average cost per day at a community hospital in the state. On the other hand, her length of stay was shorter and thus, counter to expectations, the total cost of her hospitalization was less than the average hospitalization cost for this procedure. Thus, the generalization that teaching hospitals need to look very carefully at their costs and attempt to take actions to allow them to be more competitive with the private sector needs to be qualified in two respects: First, not all procedures performed or conditions treated at teaching hospitals are necessarily more costly to the patient or to the third party payer than they would have been at a community hospital. And, second, it may be the case that the University of Kentucky, in fact, is not charging high enough rates to put it in a league with comparable university-owned teaching hospitals. We may be competitive locally and statewide, but if our costs are too low and we are not charging enough, then we will not generate the level of revenue needed for further program development, facilities, essential equipment, maintenance and repair. Therefore, our objective may need to be to raise our costs rather than to lower them.

Dr. Wiegert: Dean Clawson will now cap things off with a discussion of this patient.

Dr. D. Kay Clawson, Dean, College of Medicine: Basically, I would like to emphasize three points, all of which have been stated in the presentations. The first is that this patient is not a typical patient with rheumatoid arthritis, nor is this a typical story of chronic disease. Rather, it is an excellent example of how the medical profession would want chronic disease to be managed. Hence, we need to examine the elements that have made this what I would consider to be a success story.

Chronic disease requires a team approach to management, with a captain who is always available. Now, you may question the use of the term "team approach"

in this case, as no mention was made of a physical therapist, social worker, *etc.* However, Dr. Brower has managed this patient all these years and, quite clearly, the patient knows that she can always reach him, that he will always be responsive. In addition, she has on her team everybody at work, probably everybody in town, and a husband and family who are appropriately supportive. In using the term "appropriately," I am alluding to the concept of operant conditioning advanced by B.F. Skinner. By providing a positive reward system built around reinforcing desired behavior, a patient can be taught to live and to get enjoyment from life despite the fact that he or she is suffering from a great deal of pain. So often in chronic disease the family tries to be oversolicitous, helping the patient to do everything, and making him more and more of an invalid. This patient has been rewarded by family, friends, and job for her efforts to overcome her illness. Moreover, she has had physicians who have not allowed her to slide into the common pattern with chronic disease of seeing a pill as the answer.

The second point is that rheumatoid arthritis is clearly a medical disease. However, the medicines for this disease are not just the pain pills that patients crave, or the cortisone that makes them feel very much better, both physically and mentally. Rather, it is the type of treatment, whether it is salicylates, indocin, gold, or whatever, that is going to keep them moving as much as possible.

Now, when is medical treatment appropriate and where does surgery come in? So often when we operate on rheumatoid arthritis patients we find that the proliferative pannus has, in fact, destroyed the joint and there is no hope. Dr. Brower is to be congratulated because, whether he likes the procedure or not, his performing a synovectomy and removing the pannus prior to the destruction of the cartilage has bought the patient 16 more years with knees that have not had to undergo total knee replacement. Thus, it is very important in any disease, but especially in this disease, that the physician be knowledgeable as to when to intervene surgically and when to concentrate on the medical aspect of care.

The third point I want to make concerns the economics of medical care. This is an aspect which, as medical educators and orthopedic surgeons, I do not think we have dealt well with. Society does not seem to understand that, in terms of costs, taking care of people properly is very cheap compared to neglect. In the present case, more than $25,000 was spent on hospitalization. Even if we were to double that figure to more than allow for the costs of medication and doctors' fees, it would still be worth the cost to have the patient functioning as a productive member of society: working, earning money, paying taxes, and raising a family. Now, does this mean that we should not be overly concerned about how much medical care costs? The answer is clearly no. We have to be concerned, and we are going to have to be increasingly concerned.

TABLE 2:
COMPARATIVE COST DATA FOR ARTHROPLASTY
(Total Hip Joint Replacement)

	University of Kentucky Patient—1981	Average Kentucky Hospital Patient—1981 (Blue Cross/ Blue Shield)
Length of Stay Hospitalization	13 days	15.77 days
Cost	$4,702	$5,523
Average Cost Per Day	$ 383	$ 350
Physician Cost (Usual and Customary)	$1,450	$1,450
Anesthesia	$ 317	$ 317

I had the privilege of studying in the National Rheumatoid Hospital in Hinola, Finland, in 1967. It had been decided to move all rheumatoid arthritis patients from all over Finland to that hospital for care in order to achieve a total and comprehensive approach. Thus, rather than performing just two synovectomies on two knees, in one hospitalization they might do synovectomies on 10 to 20 joints. This approach proved to be highly cost effective. I think it is important that we give some thought to this comprehensive approach to treatment, as compared with our current incremental approach to treating these patients.

In at least one area, however, we are making great advances as is clear from Table 1, and this is in terms of the average length of hospitalization. In 1967, Doctor Brower had this patient in the hospital for 32 days to perform what I would consider a fairly simple procedure. By 1981, he had her in the hospital for only 13 days for what I would consider the ultimate in an orthopedic procedure. So, we are making progress, but this route does increase the cost per day.

Dr. Wiegert: We would like at this time to entertain questions from the audience.

Question From The Audience: Doctor Brower, what is the expected span of function of total hip replacement, and what happens subsequently?

Dr. Brower: About 70% will be functioning fairly well at the end of 10 years, which means that 30% will have come loose. It depends on the individual; obviously, if you put one in a 25-year-old male who is going to try to play basketball, it is not going to stay in place. Total hip replacement was originally designed for people over the age of 65, and John Charnley and Maurice Mueller, the originators of this technique, are both quite upset that we in the United States are applying this procedure to younger people. However, a patient at the age of 34 cannot be expected to understand the logic behind being told to go home until he or she is 65-years-old and then come back and get fixed up. The patient understood the limits to the hip replacement; if it comes loose, we will put in another one, although at greater risk and with less good results.

Question From The Audience: This patient is still fairly young. What is the expected prognosis for her 20 years from now?

Dr. Brower: This disease can flare up at almost any time, and, indeed, the prospect of her having a great deal of activity is not very great. She does not have the swelling and the pain. As indicated earlier, the disease process initially insults the articular cartilage; this does not hold up normally, and so she will gradually grow worse. It will, however, be a gradual process, unless something happens to cause it to flare up. She could go on for 20 or 30 years with a fairly good functional life.

Dr. Clawson: Yes, but I think that is why a team approach is needed. The other hip will have to be done. If she lives to be 65, both knees will have to be replaced. Some foot surgery will probably also have to be done.

Dr. Wiegert: What are the characteristics of husbands of rheumatoid arthritis patients?

Mr. Simmons: Dean Clawson has had far more practical experience in this area than I. Generally, the husband of the rheumatoid arthritis patient is overly solicitous. He will do all sorts of things for the patient and thus foster a great deal of dependency. The problem is, he gets himself in so deeply that one day he wakes up and thinks, "What am I doing? I don't like this." But it is too late to extricate himself. Frequently he will disappear, either physically or emotionally, withdrawing the support system upon which his wife has come to depend.

Dr. Clawson: A large number of these husbands do in fact pull away, and the divorce rate is extremely high. Others stay with the wife and nurture the dependency because they derive gratification from that kind of relationship. Generally you will find this relationship of dependency manifesting itself in rheumatoid arthritis patients who are not doing well medically. The wife will then die, and in two or three years the husband will get married again to a woman who in one way or another is in that same dependent position. Neither of these courses is good. By contrast, this patient's husband has done remarkably well in what we would call the operant conditioning approach, even though he is not familiar with the term. In his appropriate support of his wife he has indeed been very unique. In sum, rheumatoid arthritis cannot be treated just as a medical disease; it has social implications and ramifications as well.

Dr. Wiegert: If there are no further questions, we will draw this conference to a close. Thank you for attending.

From the Department of Surgery; University Hospital Social Services; University Hospital Planning, Programming, and Development; College of Medicine Administration, and Department of Family Practice, Albert B. Chandler Medical Center, University of Kentucky, Lexington, Kentucky. **Proceedings from the Integrative Clinicopathological Conference series (medical, preventive, social-psychological, economic, and ethical aspects of health care), organized by Doctor Joseph Engelberg, Department of Physiology and Biophysics, and edited by Ann-Marie Yanarella, Department of Medicine.**

Endobronchial Irradiation in the Treatment of Recurrent Non-Oat Cell Bronchogenic Carcinoma

OSCAR A. MENDIONDO, M.D., MARCUS DILLON, M.D. and J. LAWRENCE BEACH, PH.D.

In spite of adequate treatment with surgery and/or irradiation, local recurrence of lung cancer is frequent and poses difficult management problems. Several selected patients have been retreated at our institution with a combination of external beam and endobronchial irradiation with satisfactory palliative results. Simple techniques for transbronchoscopic implantation or insertion of radioactive sources and our early results are described.

LOCAL recurrence of lung cancer is a common problem in spite of adequate techniques of high dose external beam irradiation.[1,2] The regrowth of endobronchial masses with associated hemoptysis, lobar or total lung collapse and post-obstructive pneumonia, is a particularly distressing event which may shorten the survival or alter the quality of life of these patients. We have approached this problem in six patients with aggressive, individualized palliative re-irradiation, which includes the use of endobronchial therapy. We describe our early results in this communication. The different techniques used are illustrated in the following case reports.

Case Reports

Case Report 1: This 57-year-old male had a right pneumonectomy in December 1976, for a 3 cm. squamous cell carcinoma of the right upper lobe bronchus with metastases in the hilar lymph nodes. In May 1979, he presented with a biopsy proven recurrence in the distal right tracheal wall and right bronchial stump and external irradiation was given to a dose of 5600 rad. He was readmitted in August 1980, with hemoptysis, dyspnea, hoarseness and a right supraclavicular mass. Bronchoscopy revealed recurrent carcinoma in the distal right tracheal wall and right vocal cord paralysis. An endotracheal tube was modified by attaching to its right side a polyethylene tube sealed at one end (Figure1). This modified endotracheal tube was positioned in the trachea past the tumor with its tip inserted into the left mainstem bronchus, and after radiologic verification of the position of the tube, three Cesium-137 sources were loaded in the polyethylene tube (Figure 2). The sources were removed after 18 hours, having delivered a dose of 3311 rad at .5 cm and 1293 rad at 1.0 cm. External irradiation was started 10 days later, for a dose of 3000 rad to all areas of gross tumor followed by a small field boost to the right supraclavicular mass. Repeated bronchoscopy in October 1980, showed complete regression of the tracheal tumor with full opening of the tracheal lumen. After a five month symptom-free interval, the patient developed a recurrent malignant tracheoesophageal fistula and died shortly afterwards of aspiration pneumonia.

Case Report 2:

This 66-year-old male had a left lower lobectomy in June 1980, for a 3x2 cm adenocarcinoma of the lung without lymph node metastases. Postoperative mediastinal irradiation was given to a dose of 5000 rad. He was readmitted with hemoptysis in May 1981, with bronchoscopic findings of a large fungating mass nearly occluding the left mainstem bronchus. Pulmonary function tests showed a FEV_1 of 1.4 liters. If the remaining left upper lobe were to become obstructed, the patient would probably have a resulting functional expiratory volume of .88 liters, which would leave him dyspneic at rest. He was thus felt to be in need of aggressive palliation. External iradiation was given to a dose of 3000 rad with small fields. A repeat bronchoscopy three weeks later showed marked regression of the bronchial tumor with a small ulceration at the

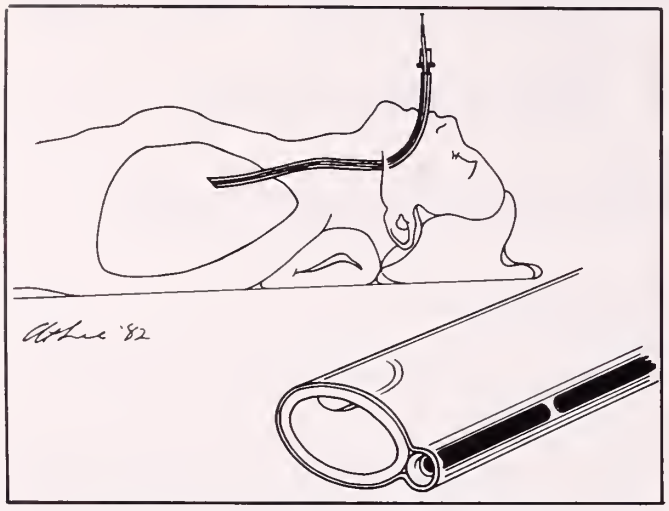


Fig. 1: Schematic demonstration of the positioning of an endotracheal tube with the attached afterloading tube for ^{137}Cs sources.



Fig. 2: The chest x-ray demonstrates the position of three ^{137}Cs sources along the distal portion of the right tracheal wall.

left lower lobe bronchial stump. Eight ^{198}Au seeds, 4.2 mCi each, were then implanted through a rigid bronchoscope in the walls of the left lower lobe bronchial stump. Three 50 cm long, 17 gauge, hollow steel needles were passed through the bronchoscope and pushed through the bronchial mucosa to a depth of 1.5 cm (Figure 3) and three rows of ^{198}Au seeds were then deposited along the needle tracks as the needles were removed (Figure 4). This implant delivered a dose of 3000 rad to a 16 cc volume and 2000 rad to a 25 cc volume. Follow-up chest films showed no dislodging of the seeds and a repeat bronchoscopy one month later showed only mucositis, with no evidence of ulceration or tumor mass. The patient died in April 1982, without evidence of local recurrence.

Case Report 3:

This 45-year-old male had an exploratory thoracotomy in August, 1979, with findings of an unresectable moderately differentiated squamous-cell carcinoma of the right lower lobe with metastasis to para-aortic lymph nodes. He was given 4500 rad concurrently with nonspecific immunotherapy, according to a South Eastern Cancer Study Group protocol. Tumor recurrence in the bronchus intermedius was documented in April 1980, and the patient was given palliative irradiation with small fields to a dose of 4600 rad. The patient was readmitted in September 1981, because of severe hemoptysis. Chest films demonstrated loss of volume of the right lung and at bronchoscopy, a fungating mass was found completely occluding the right mainstem bronchus at the takeoff of the right upper lobe bronchus. With no clinical evidence of metastatic disease and with the patient's understanding of the risks of further irradiation, it was decided to treat him aggressively. With multiple convergent small fields a dose of 2500 rad was given to the recurrent tumor volume. Two weeks later, a repeat bronchoscopy showed modest tumor regression with a small bronchial lumen. A small diameter tube was then fashioned out of polyethylene tubing and heat sealed at one end. A copper guide wire was inserted in the tube and the tube was then passed through the brush channel of a fiberoptic bronchoscope into the bronchus intermedius (Figure 5). The bronchoscope was removed and after radiologic verification of the position of the tube, a ribbon with 18 ^{192}Ir seeds spaced 1 mm apart was substituted for the guidewire (Figure 6). This implant remained in place 96 hours, delivering a dose of 2354 rad to a 2 cm diameter cylinder. Tolerance was excellent, with the patient remaining on a bland diet for the duration of the implant. One month later a repeat bronchoscopy showed complete tumor regression. At the time of this report, seven months after the endobronchial implant, there is no evidence of tumor recurrence.

Results

Table I shows the initial treatment, type of recurrence, retreatment and outcome of our patients. It should be noted that all of them had symptomatic endobronchial masses, with hemoptysis and obstruction. One patient (Case #3) is still alive seven months

TABLE 1

REIRRADIATION OF RECURRENT BRONCHOGENIC CARCINOMA

Patient	Initial Disease/Treatment	Recurrence	Treatment	Outcome
Case Report #1	SCC Rt. Lung pneumonectomy, 12/76	Trachea and Bronchial stump—5/79 Trachea and Bronchial stump—8/80	5600 rad EB Endotracheal ^{137}Cs 3000 rad EB—8/80	died 2/81 recurrence with TEF
Case Report #2	Adenocarcinoma LLL lobectomy, 5000 rad EB 6/80	Bronchial stump, LMSB, 6/80	3000 rad EB + ^{198}Au seeds implant 6/81	died 4/82 pulmonary failure without recurrence
Case Report #3	SCC RLL 4500 rad EB + Levamisole, 8/79	Br. Int. 4/80 Br. Int. 9/81	4600 rad EB 5-8/80 2500 rad EB + ^{192}Ir implant, 9/81	alive without recurrence 4/82
CB 4527842	SCC Br. Int. 5000 rad EB, 8/80	Br. Int. & RMSB, 10/81	3000 rad EB + ^{192}Ir implant, 10/81	died 1/82, liver metastases without local recurrence
RC 1869403	SCC RML & RUL 6000 rad EB 4/81	RML Bronchus 12/81	3000 rad EB + ^{192}Ir implant 1/82	without recurrence 3/82
OMcC 2331783	LCC LUL 5500 rad EB 11/80	LMSB, 11/81	3000 rad EB + ^{192}Ir implant 1/82	bronchial biopsy negative, 3/82 liver metastases 4/82

SCC = Squamous cell carcinoma
LCC = Large cell carcinoma
RMSB = Right mainstem bronchus
RUL = Right upper lobe
RML = Right middle lobe
RLL = Right lower lobe
LMSB = Left mainstem bronchus
LUL = Left upper lobe
LLL = Left lower lobe
Br. Int. = Bronchus intermedius
TEF = Tracheo-esophageal fistula
EB = external beam therapy (Co^{60} or 6-10 MeV x-rays)

after his treatment, while two others survived without symptoms for five and 10 months before dying of recurrent tumor (Case #1) or of chronic obstructive pulmonary disease. (Case #2) One patient died of liver metastases three months after retreatment of the recurrent primary lesion. and two other patients, still under local control, have been followed for only a short time. Expected complications are those of excessive irradiation but have not been overwhelming so far. Although our first patient died with a tracheoesophageal fistula, that fistula developed in an area of recurrent tumor, and it is an expected event in the natural course of a tumor in the distal trachea. One patient (Case #3) has persistent productive cough which does not interfere with a moderately active life.

Discussion

Local recurrence of lung cancer occurs frequently in spite of adequate surgery and/or high dose irradiation.[1,2] Intraluminal recurrences with bleeding, fungating masses that obstruct the bronchial lumen are particularly distressing events that acutely aggravate the course of the disease. Lobar or lung collapse in patients with already compromised pulmonary function may reduce that function to intolerable levels. Even in patients with incurable tumors and relatively short life expectancy, an aggressive approach is justified to reverse obstruction or to control hemoptysis.

Standard treatment methods had already failed in the patients described above and it was felt that a highly individualized approach could yield worthwhile palliation. The combination of low dose external irradiation and endobronchial placement of radioactive

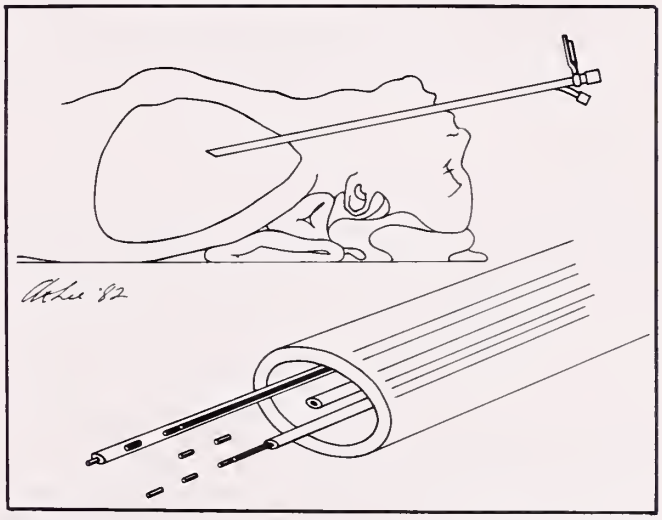


Fig. 3: Procedure used for the insertion of ^{198}Au seeds through a rigid bronchoscope. Each hollow needle is introduced 1.5 cm beyond the mucosa. As each needle is removed, ^{198}Au seeds are deposited at .5 cm intervals.

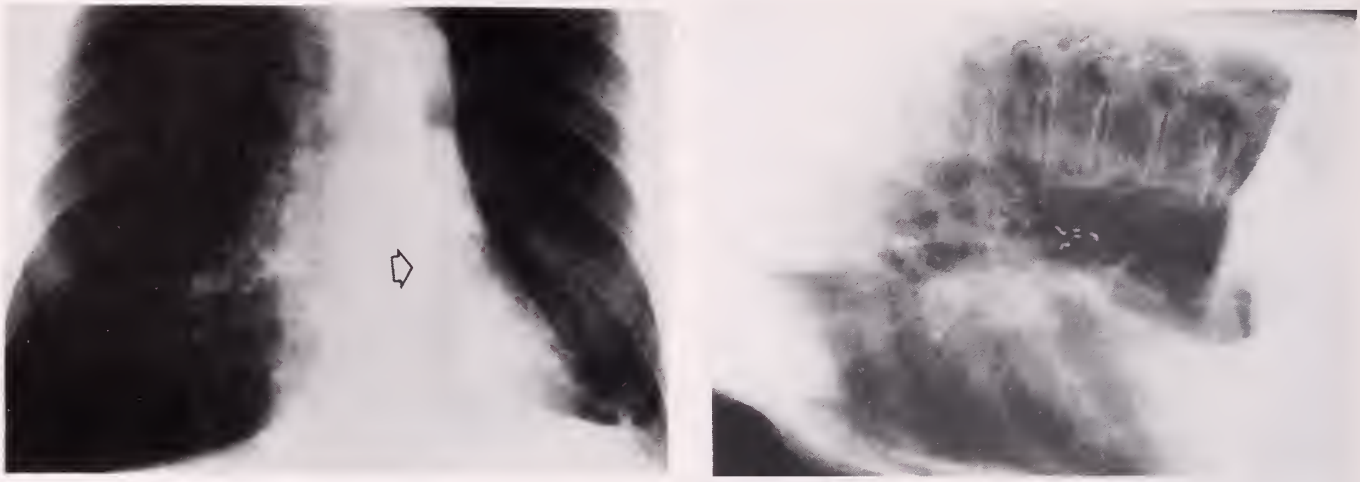


Fig. 4: Position of eight ^{198}Au seeds after transbronchoscopic implantation. a) left PA chest x-ray; b) lateral chest x-ray, right

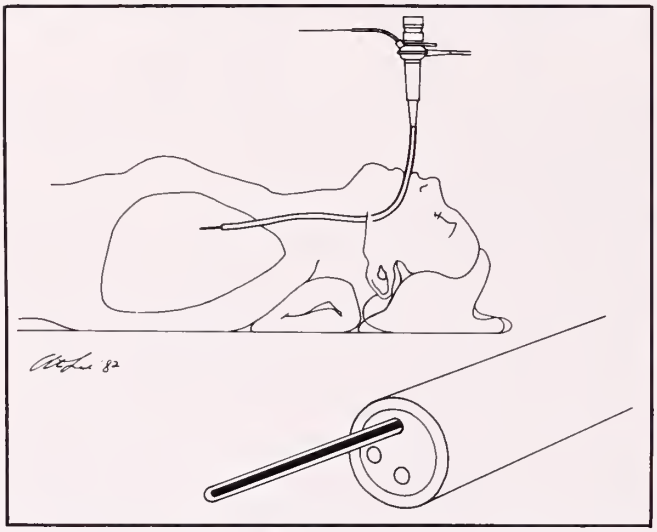


Fig. 5: Bronchoscopic assisted placement of an afterloading polyethylene tube. The tube passes through the brush channel of the fiberoptic bronchoscope. The open end of the tube can be retrieved through the nasal cavity after the bronchoscope is removed, or the tube can be placed directly through the nasal cavity.



Fig. 6: The arrows point to the ribbon of ^{192}Ir seeds along the right mainstem bronchus. The seeds have been enhanced in the photograph for better identification.

sources was thought to be the best way to achieve localized high dose reirradiation with a minimum likelihood of acute complications. A similar approach was reported to be successful in the treatment of a recurrent tracheal tumor.[3] Although it is too early to evaluate the long term results obtained in these patients, the initial response with tumor regression, airway patency, and cessation of hemoptysis indicates that adequate palliation was obtained.

The methods described here for these procedures do not call for any special instrumentation. Patient tolerance has been adequate and endobronchial irradiation should be considered as an acceptable way to obtain palliation in selected patients with recurrent lung cancer. The addition of intraluminal therapy as a boost to conventional irradiation is being considered at present in our institutions for *de novo* treatment of localized, accessible bronchogenic carcinomas.

References 1. Choi NCH, Doucette JA: Improved survival of patients with unresectable non-small-cell bronchogenic carcinoma by an innovated high-dose en-bloc radiotherapeutic approach. *Cancer* 48:101-109, 1981. 2. Perez CA, Stanley K, Rubin P, Kramer S, Brady L, Perez-Tamayo R, Brown GS, Concannon J, Rotman M, Seydel, HG: A prospective randomized study of various irradiation doses and fractionation schedules in the treatment of inoperable non-oat-cell carcinoma of the lung. *Cancer* 45:2744-2753, 1980. 3. Percarpio B, Price JC, Murphy P: Endotracheal irradiation of adenoid cystic carcinoma of the trachea. *Radiology* 128:209-210, 1978.

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Microvascular Surgery in the Treatment of Cerebrovascular Disease

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The introduction of microvascular extracranial to intracranial arterial bypass surgery has added a new dimension to the treatment of occlusive cerebrovascular disease. Over 13 different operative procedures have been reported to treat the various forms of vascular occlusions that we see in symptomatic patients. The use of ECIC bypass surgery has been useful in providing prophylactic collateral blood flow to the brain as well as treating patients with either TIAs, RIND's or completed strokes. Good results have also been obtained using revascularization techniques to provide improved blood flow to the posterior fossa. The present status of ECIC bypass surgery, the operative technique, patient selection and surgical results will be reviewed.

WITH nearly 400,000 Americans being affected by stroke each year, at a cost of over $6.5 billion, the treatment and prevention of stroke is one of the major social and economic problems facing our present health care system. Since the development of extracranial-intracranial (ECIC) arterial bypass surgery by Doctors Yasargil and Donaghy, numerous advances have been made in the surgical treatment of cerebrovascular disease.[1] The present status of ECIC bypass surgery, the indications for its use and the types of lesions treatable by ECIC bypass surgery will be reviewed.

Two major roles for ECIC arterial bypass surgery have been developed. The first is to provide prophylactic collateral blood flow in patients where elective ligation of major cerebral vessels is to be undertaken. The second is in the treatment of symptomatic occlusive cerebrovascular disease.

Prophylactic Collateral Blood Flow

Elective carotid artery ligation has long been used in the treatment of giant intracranial aneurysms that were not amenable to direct surgical clipping. Ligation of the internal carotid artery, however, has been shown to have a combined acute morbidity and mortality from 9 to 19%.[2] The risk of late ischemic complications has been reported to be 16.6% even following successful ligation.[3] Because of the potential ischemic problems related to carotid ligation, we have elected to perform a staged ligation of the internal carotid artery in conjunction with a prophylactic ECIC arterial bypass to provide adequate collateral blood flow. In such cases, a superficial temporal artery to middle cerebral artery (STA-MCA) bypass is performed and a Selverstone clamp is placed on the internal carotid artery at the same setting. Three days later, the clamp is closed and an angiogram is performed to document patency of the bypass and non-visualization of the aneurysm. The clamp is subsequently removed and the artery ligated. Results with this technique have shown a dramatic decrease in the acute morbidity and mortality of treating a variety of giant intracranial aneurysms.[4,5] Only one patient in 24 (4%) has developed an ischemic complication. Its potential benefit in preventing late ischemic problems is still unproven. Prophylactic use of the ECIC bypass has also been used in the treatment of carotid-cavernous sinus fistulas and in traumatic injuries to the internal carotid artery where a patent artery cannot be salvaged. In a similar fashion, the ECIC bypass is used to prevent the potential ischemic complications related to the carotid ligation.

Occlusive Cerebrovascular Disease

The major role of ECIC bypass surgery, has been in the treatment of symptomatic cerebrovascular disease. Patients with transient ischemic attacks (TIA's), reversible ischemic neurologic deficits (RIND's) or completed strokes who have been found to have vascular lesions that are inaccessible to standard carotid endarterectomy techniques may be candidates for ECIC

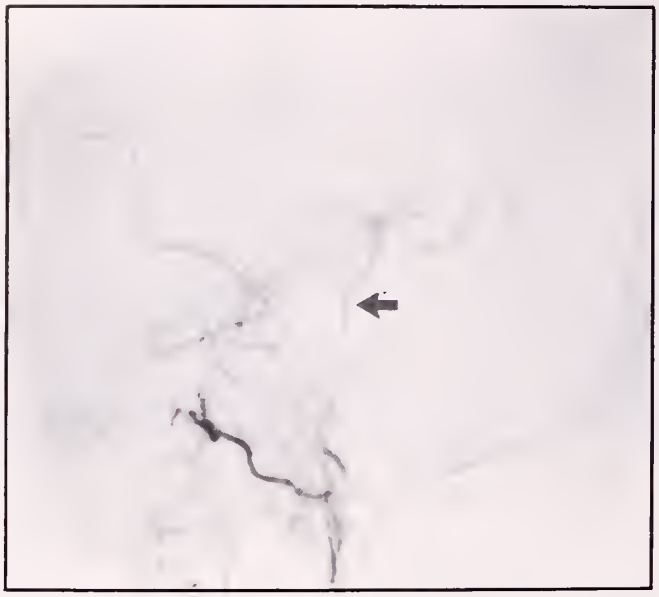


Fig. 1: Post-operative left carotid arteriogram in a patient with left internal carotid artery occlusion. A posterior branch of the superficial temporal artery (arrow) fills the full complement of the middle cerebral artery.

bypass surgery. Its role in the treatment of progressing stroke or acute cerebral infarction remains controversial.

The presence of a transient ischemic attack has long been known to be an important warning sign for the potential development of a completed stroke. The probability of a stroke developing in a patient with untreated TIA's is as high as 23% at one year and 45% by the end of five years. Among patients who survive their initial stroke, a recurrence rate of stroke at one year is 10% with a recurrence rate in five years of 20%.[6,7] Treatment with anticoagulants or aspirin have shown some promise but results still remain inadequate. The most encouraging report has been the Canadian cooperative trial of antiplatelet drugs in the treatment of transient cerebral ischemia which has shown that aspirin can reduce the incidence of subsequent TIA, stroke and death by 50% in males presenting with transient ischemic attacks.[8]

Carotid endarterectomy has been used to surgically treat symptomatic stenotic or ulcerative lesions at the carotid bifurcation. There was previously no surgical correction available when the arterial lesions were not located at the carotid bifurcation. The first microvascular revascularization procedure that was developed was the direct end to side anastomosis of the superficial temporal artery to a cortical branch of the middle cerebral artery (STA-MCA). The technique involves

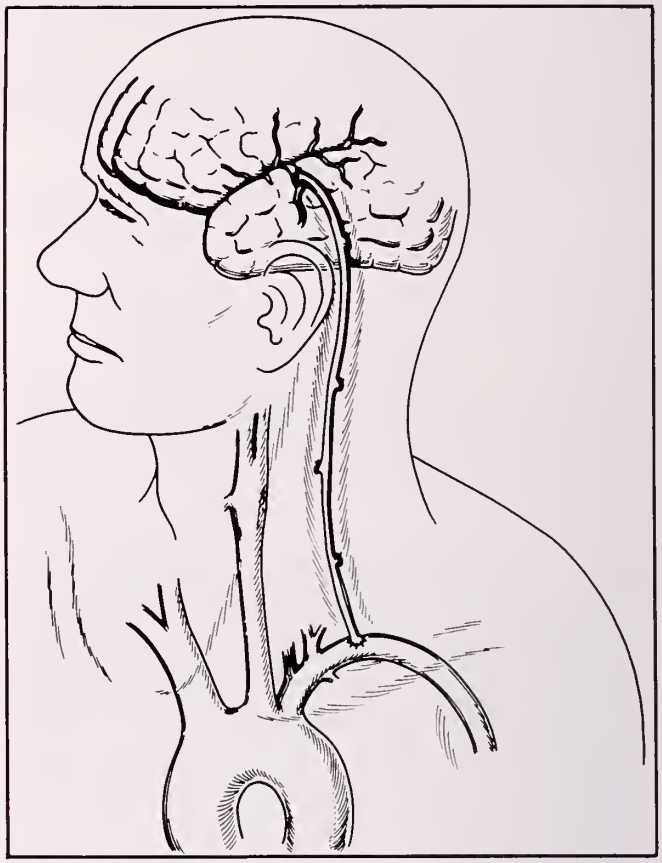


Fig. 2: The diagram shows the course of the saphenous vein bypass graph which is first anastomosed to the subclavian artery through a small supraclavicular incision then tunneled posterior to the ear and anastomosed distally into a cortical branch of the middle cerebral artery.

dissecting out the posterior branch of the superficial temporal artery as it passes anterior to the ear and extends superiorly. A small craniectomy 4 cm above the external auditory canal is made. This will always reveal a cortical branch of the middle cerebral artery that is greater than .8 mm in external diameter. The arachnoid over the vessels is then opened and using microsurgical techniques an end to side anastomosis is carried out with interrupted 11-0 sutures (Fig. 1). Because of the protective effects of barbiturates in focal cerebral ischemia, we perform the operation with the patient under deep barbiturate anesthesia.[9,10,11] This helps to prevent ischemic problems related to the temporary occlusion of the cortical middle cerebral artery branch. Table 1 lists the types of angiographic lesions found in 100 consecutive STA-MCA bypass operations. Lesions amenable to a STA-MCA bypass include stenosis of the internal carotid artery at the level of the carotid siphon, internal carotid artery occlusion and stenosis or occlusion of the middle cerebral artery. If the su-

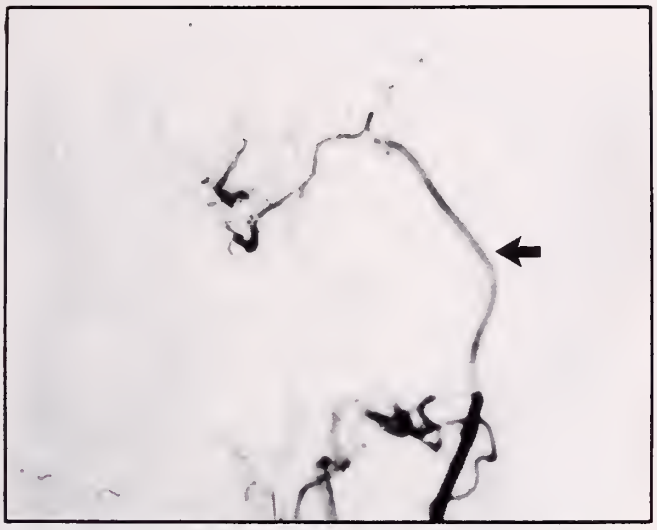
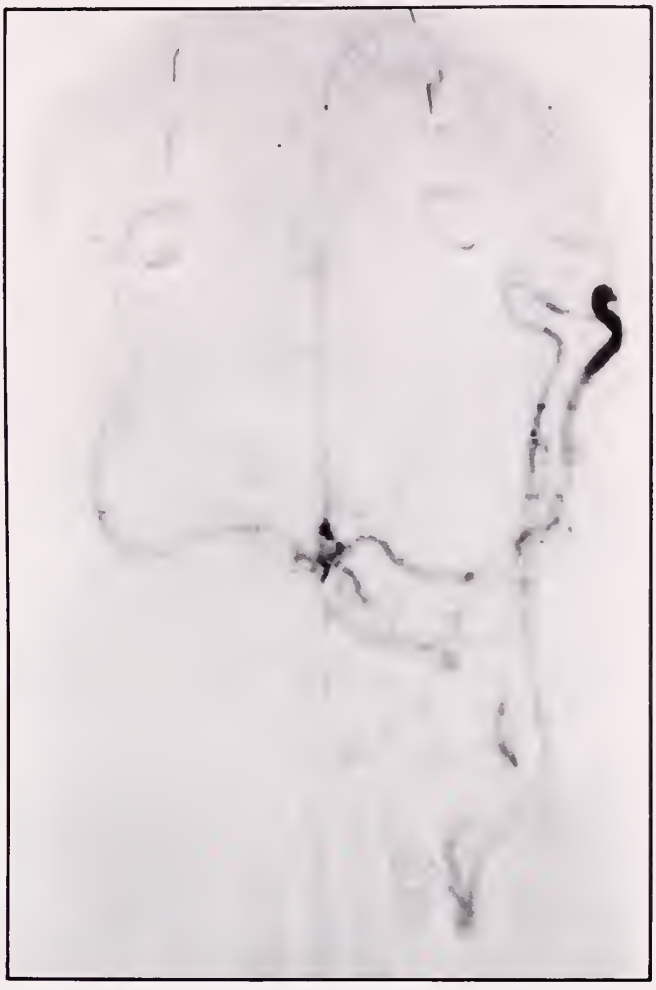


Fig. 3: A. Lateral left subclavian arteriogram showing filling through the subclavian and middle cerebral artery vein graph (arrow) completely filling the intracranial circulation on the left side.



B. An AP view of the same patient showing cross filling to the contralateral middle cerebral artery.

perficial temporal artery is not available for the donor vessel, the occipital artery can be used to carry out a similar bypass from the occipital artery to the middle cerebral artery.[12] Rarely, the middle meningeal artery may be used as the donor vessel.[13]

Many other ECIC bypass procedures have been developed since the STA-MCA bypass was first introduced. Table II lists the various types of bypass procedures that have been reported. When lesions involve occlusion of the common carotid artery (CCA), branches of the external carotid artery such as the superficial temporal or occipital artery are inadequate to provide a major increase in blood flow. In such patients, a vein graft can be used to provide a bypass from the subclavian artery to a cortical branch of the middle cerebral artery.[14] This procedure is not only useful for the treatment of patients with symptomatic common carotid artery occlusion, but also whenever immediate, large volume flow is necessary. We have measured flow rates up to 120 cc per minute immediately after completing a subclavian to MCA vein graft bypass. Procedures using a vein graft from the CCA to the MCA and from the subclavian artery to the STA with a distal STA-MCA anastomosis are alternative ways to treat patients with CCA occlusion.[15,16] A synthetic graft from the external carotid artery to the MCA has also been reported.[17] When the subclavian artery is not accessible then a vein graft can be routed over the head from the contralateral STA.[18] We have found that subclavian to MCA vein graft bypass to function better mechanically as well as avoiding an additional anastomosis. Figure 2 is a diagram of the subclavian to MCA vein graft procedure and Figure 3 shows the amount of intracranial filling that can be obtained through a single unilateral subclavian to middle cerebral artery vein bypass graft.

In rare situations there is no suitable recipient vessel present on the surface of the brain. This most often occurs in children with Moya-Moya disease, but has also been seen in adults.[19,20] For these cases, an encephalo-myosynangiosis can be utilized. This involves placing the intact STA pedicle against the arachnoid without a direct anastomosis. This stimulates the subsequent formation of small vessel collateral circulation.

Posterior fossa occlusive lesions were once considered an inaccessible area for cerebral revascularization. Vertebral-Basilar TIA's, however, are a worrisome problem. Reports from Rochester, Minnesota have

TABLE I

100 STA TO MCA BYPASSES

Angiographic Lesion	No. Pts.	No. Operations
Unilateral ICA Occlusion	52	52
Bilateral ICA Occlusion	6	12
Unilateral ICA Stenosis	17	17
Bilateral ICA Stenosis	1	2
Unilateral MCA Occlusion	7	7
Bilateral MCA Occlusion	1	2
Bilateral MCA Stenosis	1	2
ICA OCCLUSION + Contra. Stenosis	2	4
MCA Occlusion + Contra. ICA Stenosis	1	1
TOTAL	88	100

shown that transient ischemic attacks of the vertebral-basilar system have the same long-term prognosis as transient ischemic attacks of the anterior circulation.[21] Several microvascular techniques have now been developed for the treatment of vertebral basilar insufficiency. In patients with stenotic lesions at the origin of vertebral artery, direct anastomosis of the vertebral artery to the common carotid artery is our preferred treatment of choice. With more distal lesions involving the distal vertebral or basilar artery, increased collateral flow can be obtained by anastomosing the occipital artery (OA) to the caudal loop of the posterior inferior cerebellar artery (PICA).[22,23] This can also be done using a radial artery graft from the vertebral artery to PICA.[24] When increased blood flow is needed more distally because of occlusions in the basilar artery, the superficial temporal artery can be anastomosed to the superior cerebellar artery or a vein graft bypass from the external carotid artery to the posterior cerebral artery may be utilized.[25,26] Figure 4 shows how the exposure is made for our preferred procedure of occipital artery to PICA bypass.

Patient Selection

The selection of patients for ECIC bypass surgery remains controversial. Patients with the appropriate angiographic lesions and symptoms of transient ischemic attacks or a previous stroke with subsequent transient ischemic attacks appear to be good candidates for cerebral revascularization. Attempts have been made to try and select out patients who would most benefit from revascularization surgery. Schmiedek reported on the use of regional cerebral blood flow (rCBF) measurements in evaluating potential patients for ECIC bypass surgery.[27] He found that patients with normal flow

TABLE II

REPORTED METHODS OF ECIC BYPASS

DIRECT ANASTOMOSIS	
Superficial Temporal Artery	To MCA
Occipital Artery	To MCA
Middle Meningeal Artery	To MCA
Occipital Artery	To PICA
Superficial Temporal Artery	To PCA
VEIN GRAFT	
Common Carotid Artery	To MCA
Subclavian Artery	To MCA
Subclavian Artery to STA with Distal STA	To MCA
External Carotid Artery	To PCA
STA to Contralateral	To MCA
RADIAL ARTERY GRAFT	
Vertebral Artery	To PICA
SYNTHETIC GRAFT	
External Carotid Artery	To MCA
NON ANASTOMOTIC REVASCULARIZATION	
Superficial Temporal Artery	To MCA

TABLE III

67 STA-MCA BYPASSES DONE FOR ICA OCCLUSION SINCE JANUARY 1978

Operative Complications
- 1 Major Contralateral CVA
- 1 Mild Ipsilateral CVA
- 1 Wound Infection

Late Complications

Deaths
- 1 Myocardial Infarction—6 Months
- 1 Pulmonary Embolus—1 Month
- 1 Vertebral-Basilar CVA—10 Months

Ischemic
- 1 RIND after Laminectomy

throughout most of the hemisphere with a discreet ischemic focus in the proper distribution of their presenting neurologic deficit would be most suitable for ECIC bypass surgery. We have not found such a good correlation between regional cerebral blood measurements and outcome from ECIC bypass surgery.[28] It remains questionable whether or not rCBF measurements will be helpful in predicting which patients need the operative procedure. Other selection processes such as the use of hyperbaric oxygen in patients with fixed neurologic deficit to document some degree of reversibility is another aspect that is being studied in some centers.[29]

It is still debated whether or not a patient with a single stroke event who is subsequently found to have an internal carotid artery occlusion is a reasonable candidate for revascularization surgery. In Fields report of 359 patients with internal carotid artery occlusion, there was a 25% incidence of a new stroke developing

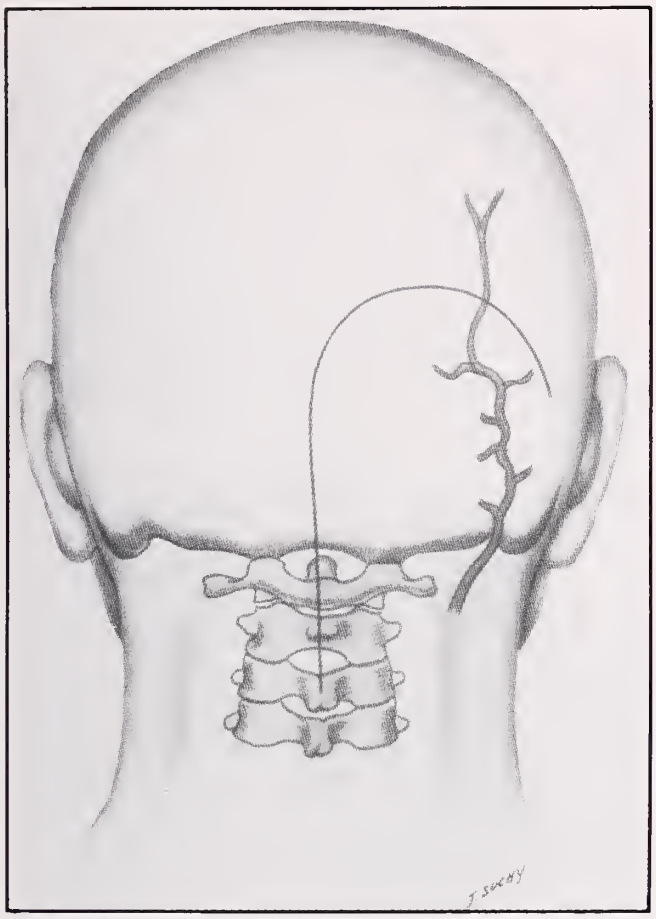
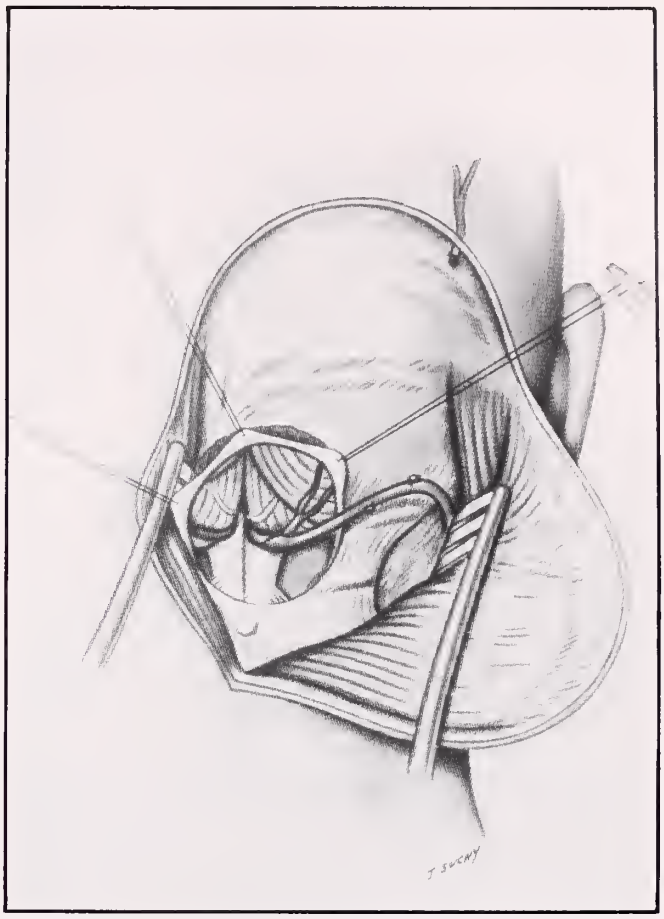


Fig. 4: A. Diagram of the hockey stick incision that is used to expose both the occipital artery and the posterior fossa for the occipital to PICA bypass.



B. Diagram shows how the occipital artery is finally anastomosed into the caudal loop of the PICA.

during an average follow-up period of 44 months.[30] Over the past four years, we have operated on a total of 67 patients with an occluded internal carotid artery. Table III lists the early and late complications in our series. There have been no operative deaths. One patient sustained a contralateral stroke and one patient sustained a mild ipsilateral stroke at the time of surgery which has improved. During late follow-up, one patient died of a pulmonary embolism at one month, one patient died of a myocardial infarction at six months and one patient died of a brain stem stroke at 10 months post-operative. Only one patient has had a late ischemic episode in the hemisphere that was bypassed. That patient sustained a RIND immediately following a long anesthetic for a lumbar laminectomy. Her bypass was found to be closed at that time but on subsequent arteriograms, was found again to be patent. Although long term results still need to be evaluated, we feel our results show considerable promise even for patients with internal carotid artery occlusion and a single stroke episode. Results of the international cooperative study under the direction of Doctors Barnett, Peerless and Allcock will hopefully better define the indications for ECIC bypass surgery in the prevention of stroke.

Although the use of ECIC bypass in the treatment of acute stroke has been reported, we do not feel that its use in such situations is very often indicated. One criticism of using ECIC bypass surgery acutely is that the blood-flow through the bypass because of spasm may be quite minimal for a matter of hours to days and therefore it is difficult to insure an immediate large volume flow to the ischemic hemisphere. Also, if there is already an area of major infarction present, the increased perfusion may cause an intracerebral hemorrhage as reported by several authors. Early revascularization along with barbiturate protection, however, may still be a feasible approach for some acute stroke patients.[11]

The long term effects of revascularization surgery is now being evaluated. Patency rates of over 90% have

been obtained by experienced microvascular surgeons. Chater reported 140 cases that were followed from three to 36 months.[31] Operative mortality was 2%, and morbidity was 1.7%. The incidence of late stroke was less than 5% and all except one of those occurred in the unoperated hemisphere. Gratzl reported a five year study of 65 patients.[32] All 10 patients presenting with TIA's remained asymptomatic. Fifteen of the 19 patients presenting with a RIND were asymptomatic and four improved. Eight of 29 patients with a completed stroke improved, 20 were unchanged and one died. Similar series have been reported by Sundt, Yasargil and others.[33,34]

Another aspect of revascularization surgery is the effect of increased blood flow in reversing fixed neurologic deficit. Reversal of fixed neurologic deficits including homonymous hemianopsia, aphasia, and other deficits have been reported.[35,36,37] Astrup has shown experimentally that electrophysiologic abnormalities occur at cerebral blood flows well above those necessary to bring about neuronal cell death.[38] It has been hypothesized that in the area which encircles the epicenter of an infarct ("the ischemic penumbra") there are neurons which, although nonfunctioning, are still viable. These so called "idling neurons" which are returned to normal function following restoration of adequate cerebral blood flow is the explanation for the reversibility of some neurologic deficits immediately following revascularization surgery. Pressure measurements made in the cortical branch of the middle cerebral artery have been correlated with systemic blood pressure and it has been shown that in patients with symptomatic cerebrovascular disease the middle cerebral artery perfusion pressure is lower than that expected in normal people and that the decrease in middle cerebral artery perfusion pressure correlates with the severity of the angiographic arterial lesions. In patients who had immediate reversal of fixed neurologic deficits following ECIC bypass surgery, the MCA perfusion pressures averaged only 32% of normal.[28] These findings support the concept in man that the idling neuron theory may indeed partly explain some of the reversibility seen in patients following bypass surgery. Therefore, patients with a stroke and only mild to moderate neurologic deficit may potentially benefit from ECIC bypass surgery. We have found no benefit from ECIC bypass surgery, however, in patients with major neurologic deficit and a large area of infarction on CT scan.

Conclusion

Extracranial to intracranial arterial bypass surgery now offers a safe alternative form of therapy for patients with previously inaccessible lesions of the intracranial and extracranial arteries. Results in patients with TIAs and RINDs have been very encouraging. More work is still necessary to help determine which patients with fixed neurologic deficits may benefit the most from revascularization surgery. The use of ECIC bypass surgery has also been helpful in preventing the ischemic problems related to elective internal carotid artery ligation.

References 1. Donaghy RMP, Ysargil MG (Eds.): Microvascular Surgery. Report of First Conference, October 6-7, 1966. St. Louis, Mosby, pp 75-86, 1967. 2. Roski Ra, Spetzler RF: Carotid Ligation in the Treatment of Cerebral Aneurysms. Pre and Postoperative Care of the Aneurysm Patient. Hopkins N (Ed.), Raven Press (In Press). 3. Roski RA, Spetzler RF, Nulsen FE: Late Complications of Carotid Ligation in the Treatment of Intracranial Aneurysms. *J Neurosurg* 54:583-587, 1981. 4. Spetzler RF, Roski RA, Schuster H, Takaoka Y: The Role of EC-IC Bypass in the Treatment of Giant Intracranial Aneurysms. *Neurological Research* 2:345-359, 1980. 5. Spetzler RF, Schuster H, Roski RA: Elective Extracranial-Intracranial Arterial Bypass in the Treatment of Inoperable Giant Internal Carotid Artery Aneurysm. *J Neurosurg* 53:22-27, 1980. 6. Whisnant JP, Matsumoto N, Elveback LR: The Effect of Anticoagulant Therapy on the Prognosis of Patients with Transient Cerebral Ischemic Attacks in a Community. Rochester, Minnesota, 1955 through 1969. *Mayo Clinic Proceedings* 48:844-848, December 1973. 7. Matsumoto N, Whisnant JP, Kurland LT, Okazaki H: Natural History of Stroke in Rochester, Minnesota, 1955 through 1969: An Extension of a Previous Study, 1945 through 1954. *Stroke* 4:20-29, 1973. 8. Canadian Cooperative Study Group: A Randomized Trial of Aspirin and Sulfinpyrazone in Threatened Stroke. *N Eng J Med* 299:53-59, 1978. 9. Selman WR, Spetzler RF, Jackson D, Roski RA, Cromrine RC: Regional Cerebral Blood Flow Following Middle Cerebral Artery Occlusion and Barbiturate Therapy in Baboons. *J Cerebral Blood Flow and Metabolism* (1)S1:S214-S215, 1981. 10. Selman WR, Spetzler RF, Roessmann UR, Rosenblatt JI, Crumrine RC: Barbiturate-Induced Coma Therapy for Focal Cerebral Ischemia. Effect After Temporary and Permanent MCA Occlusion. *J Neurosurg* 55:220-226, 1981. 11. Spetzler RF, Selman WR, Roski RA, Bonstelle C: Cerebral Revascularization During Barbiturate Coma in Primates and Humans. *Surg Neurol* 17:111-115, 1982. 12. Spetzler RF, Chater NL: Occipital Artery-Middle Cerebral Anastomosis for Cerebral Artery Occlusive Disease. *Surg Neurol* 2:235-238, 1974. 13. Miller CF, Spetzler RF, Kopaniky D: Middle Meningeal to Middle Cerebral Arterial Bypass for Cerebral Revascularization. (Case Report) *J Neurosurg.* 50:802-804, 1979. 14. Spetzler RF, Rhodes RS, Roski RA, Likavec MJ: Subclavian to Middle Cerebral Artery Saphenous Vein Bypass Graft. *J Neurosurg* 53:465-469, 1980. 15. Story JL, Brown WE Jr., Eidelberg E, Arom KV, Stewart JR: Cerebral Revascularization. Common Carotid to Distal Middle Cerebral Artery Bypass. *Neurosurgery* 2:131-135, 1978. 16. Ausman JI, Lindsay W, Ramsay RL, Chou SN: Ipsilateral Subclavian to External Carotid and STA-MCA Bypass for Retinal Ischemia. *Surg Neurol* 9:5-8, 1978. 17. Story JL, Brown WE Jr., Eidelberg E, Arom KV, Stewart

JR: Cerebral Revascularization. Proximal External Carotid to Distal Middle Cerebral Artery Bypass with a Synthetic Tube Graft. *Neurosurgery* 3:61-65, 1978. 18. Spetzler RF, Roski RA, Rhodès RS, Modic MT: The "Bonnet Bypass," *J Neurosurg* 53:707-709, 1980. 19. Matsushima Y, Fukai N, Tanaka K, Tsuruoka S, Inahba Y, Aoyagi M, Ohno K: A New Surgical Treatment of Moyamoya Disease in Children: A Preliminary Report. *Surg Neurol* 15:313-320, 1981. 20. Spetzler RF, Roski RA: Alternative Superficial Temporal Artery to Middle Cerebral Artery Revascularization Procedure. *Neurosurg* 7:484-487, 1980. 21. Cartlidge NEF, Whisnant JP, Elveback LR: Carotid and Vertebral-Basilar Transient Cerebral Ischemic Attacks: A Community Study, Rochester, Minnesota. *Mayo Clinic Proc* 52:117-120, 1977. 22. Roski RA, Spetzler RF, Hopkins N: Occipital to PICA Bypass for Vertebrobasilar Ischemia. *Neurosurg* 10(1):44-49, 1982. 23. Sundt TM, Piepgras DG: Occipital to Posterior Interior Cerebral Artery Bypass Surgery. *J Neurosurg* 48:916-928, 1978. 24. Ausman JI, Nicoloff D, Chou S: Posterior Fossa Revascularization: Anastomosis of Vertebral Artery to PICA with Interposed Radial Artery Graft. *Surg Neurol* 9:281-285, 1978. 25. Ausman JI, Diaz FG, de los Reyes RA, Pak H, Patel S, Boulos R: Superficial Temporal to Proximal Superior Cerebellar Artery Anastomosis for Basilar Artery Stenosis. *Neurosurgery* 9:56-80, 1981. 26. Sundt TM, Piepgras DG, Hausen OW, Campbell JK: Interposition Saphenous Vein Grafts for Advanced Occlusive Disease and Large Aneurysms in the Posterior Circulation. *J Neurosurg* 56:205-215, 1982. 21. Schmiedek P, Gratzl O, Spetzler RF, Steinhoff H, Enzenbach R, Brendel W, Marguth W: Criteria for the Selection of Patients for Extra-Intracranial Arterial Bypass Surgery Based on Regional Cerebral Blood Flow Measurements. *J Neurosurg* 44:303-312, 1976. 28. Spetzler RF, Roski RA, Zabramski J: Middle Cerebral Artery Perfusion Pressure in Cerebral Vascular Occlusive Disease. *NEJM* (Submitted). 29. Kapp JP: Neurological Response to Hyperbasic Oxygen—A Criterion for Cerebral Revascularization. *Surg Neurol* 15:43-50, 1981. 30. Fields WS, Lemak NA: Joint Study of Extracranial Arterial Occlusion. X. Internal Carotid Artery Occlusion. *JAMA* 235:2734-2738, 1976. 31. Chater N, Weinstein P, Spetzler R: Microvascular Bypass for Cerebral Ischemia—An Overview, 1966-1976. In "Microsurgery for Stroke." Schmiedek P, Gratzl O, Spetzler R (Eds.). NY, Springer Verlag Publishing Co., Inc., pp 79-88, 1977. 32. Gratzl O, Schmiedek P, Spetzler R, Steinhoff H, Marguth F: Clinical Experience with Extra-Intracranial Arterial Anastomosis in 65 Cases. *J Neurosurg* 44:313-324, 1976. 33. Sundt TM, Siekert RG, Piepgras DG, Sharborough FW, Hauser DW: Bypass Surgery for Vascular Disease of the Carotid System. *Mayo Clinical Proceedings* 51:677-690, 1976. 34. Yasargil MG, Yonekawa Y: Results of Microsurgical Extra-Intracranial Arterial Bypass in the Treatment of Cerebral Ischemia. *Neurosurgery* 1:22-24, 1977. 35. Roski RA, Spetzler RF, Owen M, Chandar K, Sholl JG, Nulsen FE: Reversal of Documented Seven-Year Old Visual Field Defect with Extracranial-Intracranial Arterial Anastomosis. *Surg Neurol* 10:267-268, 1978. 36. Jacques S, Garner J: Reversal of Aphasia with Superficial Temporal Artery to Middle Cerebral Artery Anastomosis. *Surg Neurol* 5:143-145, 1976. 37. Rhodes RS, Spetzler RF, Roski RA: Improved neurologic function after cerebrovascular accident with extracranial-intracranial arterial bypass. *Surg* 90:433-438, 1981. 38. Astrup J, Symon L, Branston NM, Lessen NA: Thresholds of Cerebral Ischemia. In "Microsurgery for Stroke." Schmiedek P, Gratzl O, Spetzler R (Eds.), NY, Springer-Verlag Publishing Co., Inc., pp. 16-21, 1977.

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To Crossmatch or Not To Crossmatch:

A Question of Effective Blood Utilization

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Implementing a Type and Screen/Maximum Surgical Blood Order Schedule (MSBOS) for elective surgical procedures can reduce the number of unnecessary crossmatches. Transfusion of compatible blood and reduction in hospital charges can be realized by the outlined hemotherapy guidelines currently employed at the Louisville Veterans Administration Medical Center.

DURING the last decade protocols have been instituted for better utilization of the limited supply of blood and blood products. The Type and Antibody Screen (T&S), Maximum Surgical Blood Ordering Schedule (MSBOS), postoperative autologous phlebotomy and intraoperative salvage of shed blood are the more recent procedures implemented by many transfusion services.[1-8] The concept of the MSBOS is based on individual hospital blood usage procedures. Various surgical procedures are known with certainty to require the use of blood. The maximum number of units to be crossmatched can be pre-established based on this data. Also incorporated into the MSBOS schedules are those surgical procedures unlikely to require blood transfusions and therefore no crossmatch is requested (T&S only).

A majority of hospitals utilize volunteer donor blood which is donated by less than 5% of eligible individuals in a community.[9] This volunteer program provides blood products for the more than 10 million transfusions required annually in the United States.[10] Locally, approximately 100,000 units were drawn in 1981 by the Louisville Region of the American Red Cross with an additional 10,000 units being received from outside sources.[11] Even with extension of the shelf life of blood from 21 days to 35 days with the use of CPD (citrate phosphate dextrose)—adenine additives,[12,13] sporadic blood shortage still occurs in the Louisville area.

In an effort to improve blood utilization at the Louisville Veterans Administration Medical Center, a Maximum Surgical Blood Order Schedule (MSBOS) in conjunction with a Type and Screen transfusion request was instituted for all elective surgical procedures. The intent of this report is to record the impact of a hemotherapy protocol on blood usage and cost containment at this institution.

Methods

Hemotherapy guidelines (MSBOS) for elective surgical procedures were formulated by collaboration between the Surgical and Transfusion Services. Included were type and antibody screens for surgical procedures which rarely require transfusions. The Type and Screen consisted of testing the patient's sera for ABO and Rho (D) type, and for unexpected antibodies against a three-cell reagent erythrocyte panel.[14] No blood was crossmatched for a T&S procedure unless antibodies were detected by the screening test cells and subsequently identified by a commercial panel of reagent erythrocytes. Antigen negative donor blood was then routinely crossmatched if the unexpected antibodies present in the patient's serum were considered clinically significant. Clinically significant antibodies are antibodies to red cell antigens detected in patient sera which markedly shorten the survival of transfused erythrocytes.[15]

In the event of an unanticipated bleeding episode, an "immediate spin" crossmatch was performed on patient's serum having a prior negative antibody screen. This procedure verifies the ABO type and allows compatible blood to be available within five minutes following the emergency request for blood. The routine

TABLE 1
BLOOD UTILIZATION BEFORE AND AFTER IMPLEMENTING MAXIMUM SURGICAL BLOOD ORDER SCHEDULE (MSBOS)

Jan-Feb (106 patients)	SURGICAL SERVICE					
	GENERAL	THORACIC	ORTHO	NEURO	ENT	GU
Number of patients	48	9	15	13	10	11
Number of crossmatch units (C)	123	29	40	35	38	30
Number of transfused units (T)	31	10	19	4	14	4
C/T ratio	4.0	2.9	2.1	8.8	2.7	7.5
Total C/T ratio:	3.6					
March-April (75 patients)						
Number of patients	46	4	11	3	6	5
Number of crossmatch units (C)	98	12	24	0	14	4
Number of transfused units (T)	45	2	8	1*	5	4
C/T ratio:	2.2	6.0	3.0	—	2.8	1.0
Total C/T ratio:	2.3					

*Emergency release immediate-spin crossmatch.

major crossmatch carried through the antiglobulin phase was subsequently performed on all emergency units released. The Transfusion Service Director assumed all responsibility for the safety of the blood released in each emergency utilizing the immediate spin crossmatch. Incorporated into the MSBOS was an "over-ride" mechanism. Following consultation with the Transfusion Service Director, surgeons or anesthesiologists could request additional blood preoperatively if a greater than usual blood loss was anticipated for a particular patient.

A retrospective review was conducted of transfusion practices of packed red cells or whole blood at this Center during the first four months of 1980. Red cell transfusions for the months of January and February, 1980, prior to starting of the type and screen policy, were compared to the months of March and April, 1980, when the T&S was in effect. Investigated were the following: (1) crossmatch-to-transfusion (C/T) ratio (the number of units crossmatched divided by the actual number of units transfused); (2) antibodies identified with T&S procedure; (3) clinical management problems; and (4) cost effectiveness.

Results

During the two-month period prior to the use of the T&S/MSBOS hemotherapy protocol, there were 106 patient crossmatch requests for 295 units of packed red cells or whole blood. Eighty-two red cell transfusions were given either during operation or within the 24 hour post-surgical period. As indicated in Table 1, most surgical specialties demonstrated crossmatch-to-transfusion ratios greater than 2.5. Following institution of the MSBOS, there occurred a marked reduction in the number of units of blood crossmatched. Of the 152 units crossmatched for 75 patients having surgical procedures during the first two months the hemotherapy protocol was in effect, only 65 units of blood were transfused. The total C/T ratio for all Services decreased to 2.3. General Surgery, Neurosurgery and Urology Services demonstrated a significant reduction in their respective C/T ratio. The apparent increase in the ratio for the Thoracic Surgery Service was due to early termination of three cases because of the inoperability of a lung lesion. No blood was required and proper crossmatching guidelines had been followed for these cases. The only transfusion given by Neurosurgery Service was a one unit emergency release, immediate-spin crossmatch of a T&S procedure. Subsequent review by the Transfusion Committee decided this to be an inappropriate transfusion.

Two of 27 Type and Screen patients were found on antibody screen to have a single unexpected antibody. Both of these antibodies (anti-Le^b and anti-I) were not reactive in the albumin (37°C) or antiglobulin phase of testing. These antibodies were considered clinically insignificant should red cell transfusions have been required.

Based on direct communication with 11 hospitals in the Louisville area, average charges of $22.26 for a Type and Screen plus an additional charge of $16.59 for a complete crossmatch are presently in effect. Use of a Type and Screen would have resulted in a reduction of approximately $5,000 in patient or third-party

charges during the initial two months of use of the hemotherapy guidelines. The $5,000 represents the savings from the reduction in the allowable crossmatch requests as determined from the MSBOS and reflected in the reduction by one-half of the C/T ratio. Included in these charges would be the 27 Type and Screen patients spared 2-3 unit crossmatch charges ($33.18 to $49.77 reduction per patient).

Table 2 lists the Maximum Surgical Blood Order Schedule (MSBOS) utilized in conjunction with the Type and Screen presently in effect at the Louisville Veterans Administration Medical Center. The schedule was based on past blood use experience at this teaching institution by each of the various surgical specialities. Revisions are made periodically to reflect changing operative techniques and blood usage.

Discussion

Many transfusion services crossmatch a single unit of blood for two or three different patients undergoing elective surgical procedures on the same day. The rationale is usually based on existing blood shortages or knowledge that a surgeon or anesthesiologist rarely used blood for a particular procedure. This practice could result in unavailable blood, or delay in supplying blood, for a particular emergency blood loss case. Other transfusion services with better blood supplies elect to crossmatch units of blood to be held in reserve for a particular patient in case the need for transfusion may be required. This practice also generates additional blood shortages as the actual shelf life of the unit is reduced by the usually held 48-hour period.

Application of hemotherapy guidelines can increase the blood supply by decreasing demand.[16] Significant improvements in blood inventory, decreases in unit out-dating, and reduced patient charges has been reported.[2] Similar results have been experienced at the V. A. Medical Center following implementation of the MSBOS. The C/T ratio was reduced one-half during the period of study. A C/T ratio should be 2.5:1 or less for a hospital with a full range of medical and surgical services.[2] With the continuous education of the hospital staff and practical experience with the guidelines, this institution maintains a C/T ratio of 1.9-2.0 annually, as compared to 4.0-5.0 in previous years.

Concern with the safety of an immediate-spin crossmatch was initially raised with the institution of the Type and Screen policy. On several occasions units of released blood were returned to the Blood Bank with a "crossmatch" request. In most instances these units were never transfused even following extensive assurances of the safety of this procedure by the Transfusion Service Director. The Type and Antibody screen has been reported to be 99.99% effective in preventing transfusion of incompatible blood.[16] When unexpected antibodies are detected on a screen, antigen negative units of blood are automatically crossmatched by the Transfusion Service, providing the antibodies are reactive at 37°C albumin or anti-globulin phase of testing (clinically significant antibodies.)

In addition to the concern for safety of a Type and Screen hemotherapy policy, surgeons and anesthesiologists must be assured of prompt availability of blood in the event transfusion becomes necessary. A common misunderstanding with the use of the Type and Screen is that blood is actually being "held" by the Blood Bank for a particular T&S patient. A unit of blood is not held in reserve for a particular case. An adequate type-specific blood inventory is maintained, however, to cover all surgical procedures. By maintaining an inventory of donor type-specific blood, blood is available for transfusion within five minutes upon receipt of request. No delays or complications have been experienced to date.

The cost benefit of a Type and Screen blood utilization program should be considered. Significant reduction in patient or third-party charges have occurred in hospitals incorporating the T&S and MSBOS policies. Reduction in patient charges of 83% has been reported.[2] Approximately a 50% reduction in blood bank costs occurred at the V.A. Medical Center in only two months. Greater savings would probably be realized in those hospitals having higher C/T ratios.

Effective blood utilization should be a major concern of surgeons, anesthesiologists and directors of transfusion services. Hemotherapy policies incorporating the Type and Screen/Maximum Surgical Blood Order Schedule have proven to be safe and effective. These should be incorporated into existing local community hospital blood transfusion programs. Directors of transfusion services in collaboration with surgeons and anesthesiologists can formulate these programs based on their respective hospital transfusion priorities. Patients requiring blood transfusions according to acceptable clinical criteria should not be denied such therapy. However, use of hemotherapy guidelines, as well as newer techniques such as intraoperative au-

TABLE 2

MAXIMUM SURGICAL BLOOD ORDER SCHEDULE FOR ELECTIVE SURGICAL PROCEDURES

PROCEDURES	RECOMMENDED NUMBER OF UNITS TO CROSSMATCH
GENERAL SURGERY	
Amputations, A/K, B/K	T&S
Appendectomy	T&S
Cholecystectomy with duct explorations	T&S
Colon resections:	
Total large colon	4
Hemicolectomy	2
Sigmoidectomy	2
Colostomy closures and revisions	T&S
Colostomy, Gastrostomy	T&S
Excision of lymph nodes	T&S
Exploration of laparotomy	2
Gastrectomy	2
Hemorrhoidectomy; anal fistula excision	T&S
Hernia repair (all)	T&S
Pancreatectomy:	
Partial or radical	4
Parathyroidectomy	T&S
Parotidectomy	T&S
Pilonidal cyst	T&S
Portocaval shunt	4
Small bowel segment resection	T&S
Splenectomy	2
Thyroidectomy:	
Partial or total	T&S
Tonsillectomy with or without adenoidectomy	T&S
Tracheostomy	T&S
Vagotomy and pyloroplasty	T&S
Vein stripping	T&S
VASCULAR SURGERY	
Aneurysm resection, abdominal	6
Aortofemoral bypass, graft	4
Carotid endarterectomy	T&S
Femoral-popliteal bypass, graft	2
THORACIC SURGERY	
Esophageal resection	4
Thoracotomy, biopsy	T&S
Pneumonectomy, partial or total	2
Pulmonary wedge resection	2
Pericardial biopsy	T&S
NEUROSURGERY	
Craniotomy:	
Aneurysm	4
Subdural, epidural hematoma	2
Tumor	4
Laminectomy, disc	T&S
Laminectomy, tumor	2
Nerve repair	T&S
Spinal cord tumors	2
Transphenoidal hypophysectomy	T&S
Ventral shunts	T&S

TABLE 2—Continued

MAXIMUM SURGICAL BLOOD ORDER SCHEDULE FOR ELECTIVE SURGICAL PROCEDURES

PROCEDURES	RECOMMENDED NUMBER OF UNITS TO CROSSMATCH
OTOLARYNGOLOGY	
Caldwell-Luc operation	T&S
Ethmoidectomy	2
Glossectomy, hemiglossectomy	2
Laryngectomy	2
with radical neck dissection	6
Laryngeal biopsy	T&S
Mastoidectomy	2
Maxillectomy	2
Radical neck dissection	2
with glossectomy or mandibulectomy	4
Septoplasty	T&S
UROLOGY	
Adrenalectomy	3
Circumcision	T&S
Ileal conduit	T&S
Nephrectomy	2
Open prostate biopsy	T&S
Open prostatectomy	2
Orchiectomy	T&S
Pyelolithotomy	T&S
Radical cystectomy	4
Transurethral resection of prostate	T&S
Transurethral resection for bladder tumor	T&S
Ureterolithotomy	T&S
ORTHOPEDICS	
Amputation, A/K, B/K	T&S
Arthrotomy and arthroscopy	T&S
Dupuytren's contracture release	T&S
Laminectomy, disc	T&S
Laminectomy, tumor	2
Medial meniscectomy	T&S
Open reductions:	
Hip nailing	2
Hip replacement	4
Hip reduction	4
Femur reduction	4
Open reduction, other	2
Removal of hip pin	T&S
PLASTIC SURGERY	
Otoplasty	T&S
Repair of decubitis ulcer	T&S
Rhinoplasty	T&S
Skin flap	T&S
Skin graft	T&S
GYNECOLOGY	
Conization	T&S
Dilatation and currettage	T&S
Hysterectomy:	
Vaginal	T&S
Abdominal	T&S
Oophorectomy	T&S

tologous transfusion, will aid in increasing the presently short supply of blood reserves.

References 1. Friedman BA, Oberman HA, Chadwick AR and Kingdom KI: The maximum surgical blood order schedule and surgical blood use in the United States. *Transfusion* 16:380-387, 1976. 2. Boral LI and Henry JB: The type and screen: a safe alternative and supplement in selected surgical procedures. *Transfusion* 17:163-168, 1977. 3. Rouault C and Gruenhagen J: Reorganization of blood ordering practices. *Transfusion* 18:448-453, 1978. 4. Friedman BA: An analysis of surgical blood use in United States hospitals with application to the maximum surgical blood order schedule. *Transfusion* 19:268-278, 1979. 5. Cove H, Matloff J, Sacks HJ, Sherbecoe R and Goldfinger D: Autologous blood transfusion in coronary artery bypass surgery. *Transfusion* 16:245-248, 1976. 6. Silvergleid AJ: Autologous transfusion experience in a community blood center. *JAMA* 241:2724-2725, 1979. 7. McKinzie FN, Heimbecker RD, Wall W, Robert A, Block L and Barr R: Intraoperative autotransfusion in elective and emergency vascular surgery. *Surgery* 83:470-475, 1978. 8. Noon G: Intraoperative autotransfusion. *Surgery* 34:722-727, 1978. 9. Annual Report of American Association of Blood Banks, 1981, Washington, D.C., p. 17. 10. Annual Report of American Red Cross, 1981, Washington, D.C., p. 9. 11. Personal Communication: Jayne Hollander, M.D., Medical Director, Louisville Region, American Red Cross, March 1982. 12. Zack TF, Bensinger TA, Peck CC, Chillar RK, Beutler E, Button PR, McCurdy PR, Josephson AM and Greenwalt TJ: The in vivo survival of red blood cells stored in modified CPD with adenine. Report of a multi-institutional cooperative effort. *Transfusion* 17:374-382, 1977. 13. Moore GL, Ledford MD and Peck CC: The in vitro evaluation of modifications in CPD-adenine anticoagulated-preserved blood at various hematocrits. *Transfusion* 20:419-426, 1980. 14. Tests for Serologic Incompatability (Crossmatching). Technical Manual, Eighth edition, American Association of Blood Banks, Washington, D.C., 1981. 15. Mollison PL: Blood transfusion in Clinical Medicine. Sixth edition. London, Blackwell Scientific Publications. pp 483-556, 1971. 16. Boyd PR, Sheedy KC and Henry JB: Type and Screen. Use and effectiveness in elective surgery. *Am J Clin Path* 73:694-699, 1980.

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BRIEF SUMMARY
PROCARDIA® CAPSULES For Oral Use
(nifedipine)

INDICATIONS AND USAGE: I. Vasospastic Angina: PROCARDIA (nifedipine) is indicated for the management of vasospastic angina confirmed by any of the following criteria: 1) classical pattern of angina at rest accompanied by ST segment elevation, 2) angina or coronary artery spasm provoked by ergonovine, or 3) angiographically demonstrated coronary artery spasm. In those patients who have had angiography, the presence of significant fixed obstructive disease is not incompatible with the diagnosis of vasospastic angina, provided that the above criteria are satisfied. PROCARDIA may also be used where the clinical presentation suggests a possible vasospastic component but where vasospasm has not been confirmed, e.g., where pain has a variable threshold on exertion or in unstable angina where electrocardiographic findings are compatible with intermittent vasospasm, or when angina is refractory to nitrates and/or adequate doses of beta blockers.

II. Chronic Stable Angina (Classical Effort-Associated Angina): PROCARDIA is indicated for the management of chronic stable angina (effort-associated angina) without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or organic nitrates or who cannot tolerate those agents.

In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in those patients are incomplete.

Controlled studies in small numbers of patients suggest concomitant use of PROCARDIA and beta blocking agents may be beneficial in patients with chronic stable angina, but available information is not sufficient to predict with confidence the effects of concurrent treatment, especially in patients with compromised left ventricular function or cardiac conduction abnormalities. When introducing such concomitant therapy, care must be taken to monitor blood pressure closely since severe hypotension can occur from the combined effects of the drugs. (See Warnings.)

CONTRAINDICATIONS: Known hypersensitivity reaction to PROCARDIA.

WARNINGS: Excessive Hypotension: Although in most patients, the hypotensive effect of PROCARDIA is modest and well tolerated, occasional patients have had excessive and poorly tolerated hypotension. These responses have usually occurred during initial titration or at the time of subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta blockers.

Severe hypotension and/or increased fluid volume requirements have been reported in patients receiving PROCARDIA together with a beta blocking agent who underwent coronary artery bypass surgery using high dose fentanyl anesthesia. The interaction with high dose fentanyl appears to be due to the combination of PROCARDIA and a beta blocker, but the possibility that it may occur with PROCARDIA alone, with low doses of fentanyl, in other surgical procedures, or with other narcotic analgesics cannot be ruled out.

Increased Angina: Occasional patients have developed well documented increased frequency, duration or severity of angina on starting PROCARDIA or at the time of dosage increases. The mechanism of this response is not established but could result from decreased coronary perfusion associated with decreased diastolic pressure with increased heart rate, or from increased demand resulting from increased heart rate alone.

Beta Blocker Withdrawal: Patients recently withdrawn from beta blockers may develop a withdrawal syndrome with increased angina, probably related to increased sensitivity to catecholamines. Initiation of PROCARDIA treatment will not prevent this occurrence and might be expected to exacerbate it by provoking reflex catecholamine release. There have been occasional reports of increased angina in a setting of beta blocker withdrawal and PROCARDIA initiation. It is important to taper beta blockers if possible, rather than stopping them abruptly before beginning PROCARDIA.

Congestive Heart Failure: Rarely, patients, usually receiving a beta blocker, have developed heart failure after beginning PROCARDIA. Patients with tight aortic stenosis may be at greater risk for such an event.

PRECAUTIONS: General: Hypotension: Because PROCARDIA decreases peripheral vascular resistance, careful monitoring of blood pressure during the initial administration and titration of PROCARDIA is suggested. Close observation is especially recommended for patients already taking medications that are known to lower blood pressure. (See Warnings.)

Peripheral edema: Mild to moderate peripheral edema, typically associated with arterial vasodilation and not due to left ventricular dysfunction, occurs in about one in ten patients treated with PROCARDIA. This edema occurs primarily in the lower extremities and usually responds to diuretic therapy. With patients whose angina is complicated by congestive heart failure, care should be taken to differentiate this peripheral edema from the effects of increasing left ventricular dysfunction.

Drug interactions: Beta-adrenergic blocking agents: (See Indications and Warnings.) Experience in over 1400 patients in a non-comparative clinical trial has shown that concomitant administration of PROCARDIA and beta-blocking agents is usually well tolerated, but there have been occasional literature reports suggesting that the combination may increase the likelihood of congestive heart failure, severe hypotension or exacerbation of angina.

Long-acting nitrates: PROCARDIA may be safely co-administered with nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.

Digitalis: Administration of PROCARDIA with digoxin increased digoxin levels in nine of twelve normal volunteers. The average increase was 45%. Another investigator found no increase in digoxin levels in thirteen patients with coronary artery disease. In an uncontrolled study of over two hundred patients with congestive heart failure during which digoxin blood levels were not measured, digitalis toxicity was not observed. Since there have been isolated reports of patients with elevated digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing PROCARDIA to avoid possible over- or under-digitalization.

Carcinogenesis, mutagenesis, impairment of fertility: When given to rats prior to mating, nifedipine caused reduced fertility at a dose approximately 30 times the maximum recommended human dose.

Pregnancy: Category C. Please see full prescribing information with reference to teratogenicity in rats, embryotoxicity in rats, mice and rabbits, and abnormalities in monkeys.

ADVERSE REACTIONS: The most common adverse events include dizziness or light-headedness, peripheral edema, nausea, weakness, headache and flushing each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%. Syncopal episodes did not recur with reduction in the dose of PROCARDIA or concomitant antianginal medication. Additionally, the following have been reported: muscle cramps, nervousness, dyspnea, nasal and chest congestion, diarrhea, constipation, inflammation, joint stiffness, shakiness, sleep disturbances, blurred vision, difficulties in balance, dermatitis, pruritus, urticaria, fever, sweating, chills, and sexual difficulties. Very rarely, introduction of PROCARDIA therapy was associated with an increase in anginal pain, possibly due to associated hypotension.

In addition, more serious adverse events were observed, not readily distinguishable from the natural history of the disease in these patients. It remains possible, however, that some or many of these events were drug related. Myocardial infarction occurred in about 4% of patients and congestive heart failure or pulmonary edema in about 2%. Ventricular arrhythmias or conduction disturbances each occurred in fewer than 0.5% of patients.

Laboratory Tests: Rare, mild to moderate, transient elevations of enzymes such as alkaline phosphatase, CPK, LDH, SGOT, and SGPT have been noted, and a single incident of significantly elevated transaminases and alkaline phosphatase was seen in a patient with a history of gall bladder disease after about eleven months of nifedipine therapy. The relationship to PROCARDIA therapy is uncertain. These laboratory abnormalities have rarely been associated with clinical symptoms. Cholestasis, possibly due to PROCARDIA therapy, has been reported twice in the extensive world literature.

HOW SUPPLIED: Each orange, soft gelatin PROCAROIA CAPSULE contains 10 mg of nifedipine. PROCARDIA CAPSULES are supplied in bottles of 100 (NDC 0069-2600-66), 300 (NOC 0069-2600-72), and unit dose (10x10) (NDC 0069-2600-41). The capsules should be protected from light and moisture and stored at controlled room temperature 59° to 77°F (15° to 25°C) in the manufacturer's original container.

More detailed professional information available on request.

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"I can do things that I couldn't do for 3 yrs. including joining the human race again."



Quotes from an unsolicited letter received by Pfizer from an angina patient. While this patient's experience is representative of many unsolicited comments received, not all patients will respond to Procardia nor will they all respond to the same degree.

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"My daily routine consisted of sitting in my chair trying to stay alive."

"My doctor switched me to PROCARDIA[*] *as soon as it became available. The change in my condition is remarkable."*

"I shop, cook and can plant flowers again."

"I have been able to do volunteer work...and feel needed and useful once again."

PROCARDIA can mean the return to a more normal life for your patients—having fewer anginal attacks,[1] taking fewer nitroglycerin tablets,[2] doing more, and being more productive once again.

Side effects are usually mild (most frequently reported are dizziness or lightheadedness, peripheral edema, nausea, weakness, headache and flushing, each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%).



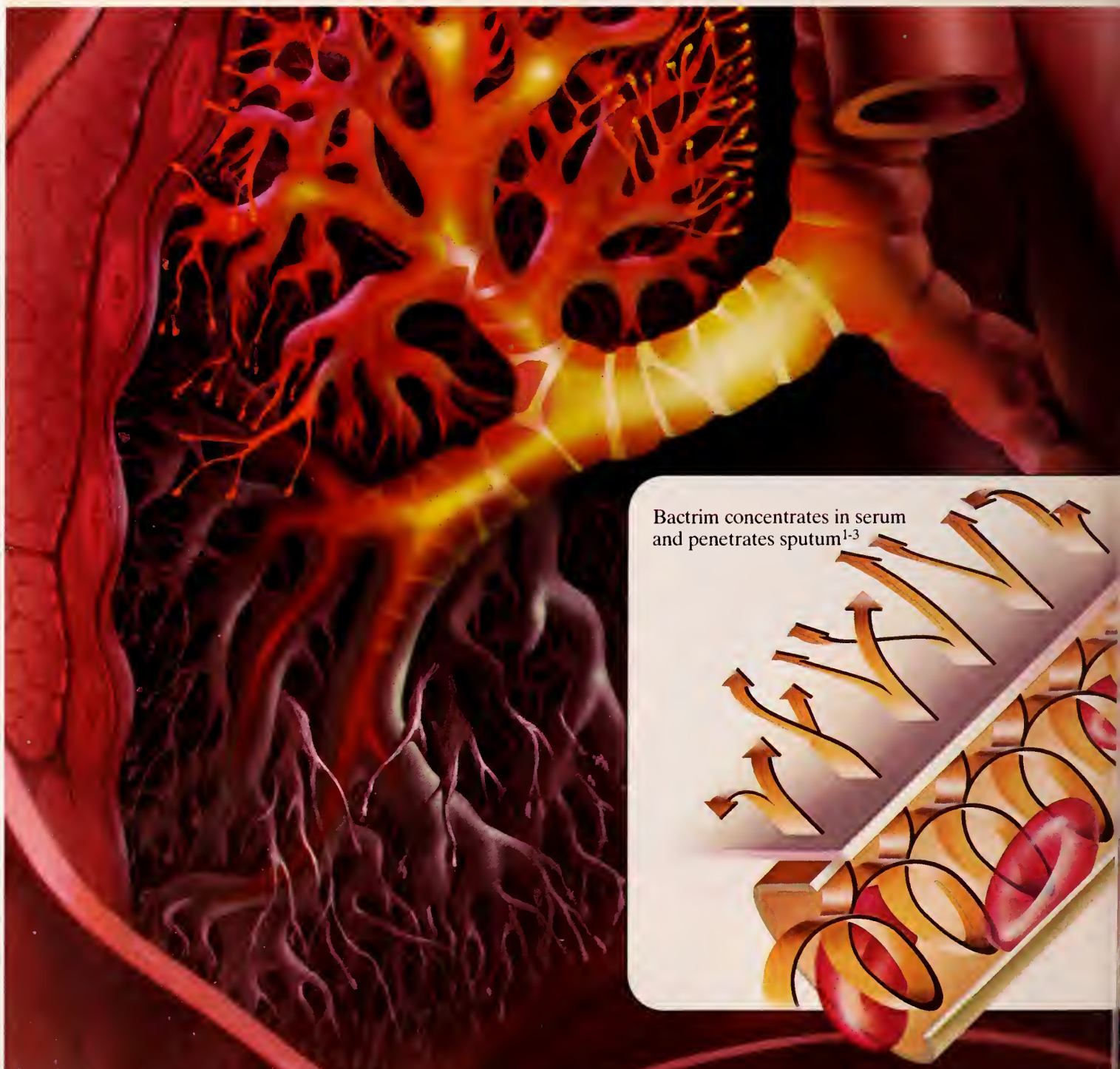
for the varied faces of angina

PROCARDIA®
(NIFEDIPINE) *Capsules 10 mg*

*Procardia is indicated for the management of:
1) Confirmed vasospastic angina.
2) Angina where the clinical presentation suggests a possible vasospastic component.
3) Chronic stable angina without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or nitrates or who cannot tolerate these agents. In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks' duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.

Please see PROCARDIA *brief summary on adjoining page.*

Bactrim™ attacks the
(trimethoprim and sulfamethoxazole/Roche)
in acute exacerbations



Bactrim concentrates in serum and penetrates sputum[1-3]

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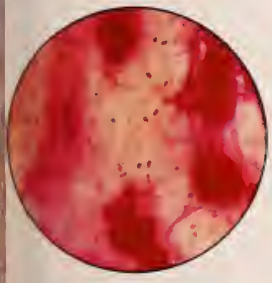
major pathogens of chronic bronchitis*

Bactrim clears sputum of susceptible bacteria

In sputum cultures from patients with acute exacerbations of chronic bronchitis, *H. influenzae* and *S. pneumoniae* are isolated more often than any other pathogens.[4,5] One study of transtracheal aspirates from 76 patients with acute exacerbations found that 80% of the isolates were of these two pathogens.[5]

Bactrim is effective *in vitro* against most strains of both *S. pneumoniae* and *H. influenzae*—even ampicillin-resistant strains. And in acute exacerbations of chronic bronchitis involving these two pathogens, sputum cultures taken seven days after a two-week course of therapy showed that Bactrim eradicated these bacteria in 91% (50 of 55) of the patients treated.[6]

tacks *H. influenzae*—even
mpicillin-resistant strains



attacks *S. pneumoniae*



Bactrim reduces coughing and sputum production

In three double-blind comparisons with ampicillin *q.i.d.*, Bactrim DS proved equally effective on all clinical parameters.[7-9] Bactrim reduced the frequency and severity of coughing, reduced the amount of sputum produced and cleared the sputum of purulence.

Bactrim has the added advantages of *b.i.d.* dosage convenience and a lower incidence of diarrhea than with ampicillin, and it is useful in patients allergic to penicillins.

Bactrim also proved more effective than tetracyclines in 10 clinical trials involving nearly 700 patients.[10] Overall clinical condition of the patients, changes in sputum purulence, reduction in sputum volume and microbiological clearance of pathogens—all improved more with Bactrim therapy than with tetracyclines. G.I. side effects occurred in only 7% of patients treated with Bactrim compared with 12% of tetracycline-treated patients. (See Adverse Reactions in summary of product information on next page.)

Bactrim is contraindicated in pregnancy at term and nursing mothers, infants under two months of age, documented megaloblastic anemia due to folate deficiency and hypersensitivity.

Bactrim DS. For acute exacerbations of chronic bronchitis in adults* when it offers an advantage over single-agent antibacterials.

References: 1. Hughes DTD, Bye A, Hodder P: *Adv Antimicrob Antineoplastic Chemother 1/2*:1105-1106, 1971. **2.** Jordan GW *et al: Can Med Assoc J 112*:91S-95S, Jun 14, 1975. **3.** Beck H, Pechere JC: *Prog Antimicrob Anticancer Chemother 1*:663-667, 1969. **4.** Quintiliani R: Microbiological and therapeutic considerations in exacerbations of chronic bronchitis, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts;* Princeton Junction, NJ, Communications Media for Education, Inc., 1980, pp. 9-12. **5.** Schreiner A *et al: Infection 6*(2):54-56, 1978. **6.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **7.** Chodosh S: Treatment of acute exacerbations of chronic bronchitis: results of a double-blind crossover clinical trial, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts. Op. cit.*, pp. 15-16. **8.** Chervinsky P: Double-blind clinical comparisons between trimethoprim-sulfamethoxazole (Bactrim™) and ampicillin in the treatment of bronchitic exacerbations. *Ibid.*, pp. 17-18. **9.** Dulfano MJ: Trimethoprim-sulfamethoxazole vs. ampicillin in the treatment of exacerbations of chronic bronchitis. *Ibid.*, pp. 19-20. **10.** Medici TC: Trimethoprim-sulfamethoxazole (Bactrim™) in treating acute exacerbations of chronic bronchitis: summary of European clinical experience. *Ibid.*, pp. 13-14.

Economical b.i.d.

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole/Roche)

*Due to susceptible organisms. **Please see next page for summary of product information.**

Bactrim™

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please conault complete product information, a aummary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* it is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitia media in children due to susceptible atrains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in phyaician'a judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two yeara of age. Bactrim ia not indicated for prophyiactic or proionged adminiatration in otitia media at any age.

For acute exacerbations of chronic bronchitia in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in phyaician'a judgment it offers an advantage over a aingle antimicrobial agent.

For enteritis due to susceptible straina of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitia.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders Frequent CBC's are recommended, therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients

Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia *Allergic reactions* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients, cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN

Adults. Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis

Children. Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days

PNEUMOCYSTIS CARINII PNEUMONITIS.

Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets*, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100, Tel-E-Dose® packages of 100; Prescription Paks of 20 and 28. *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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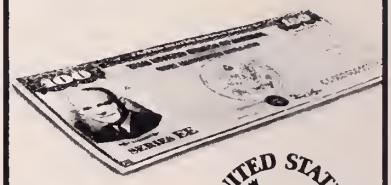
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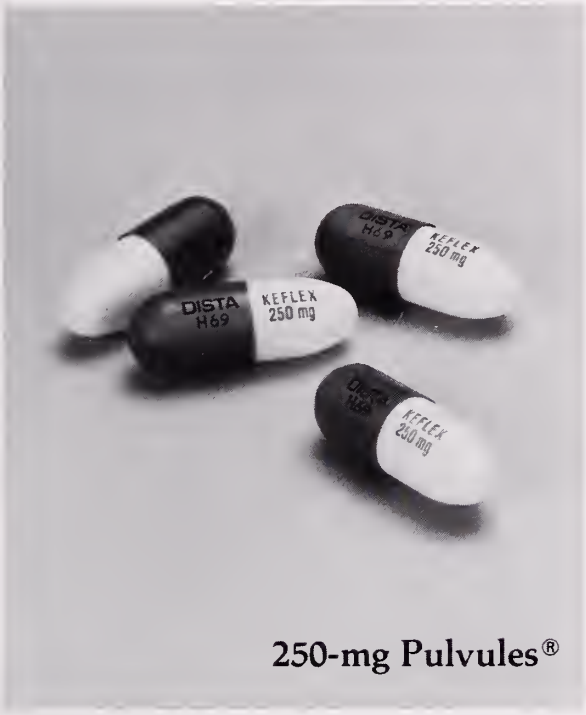
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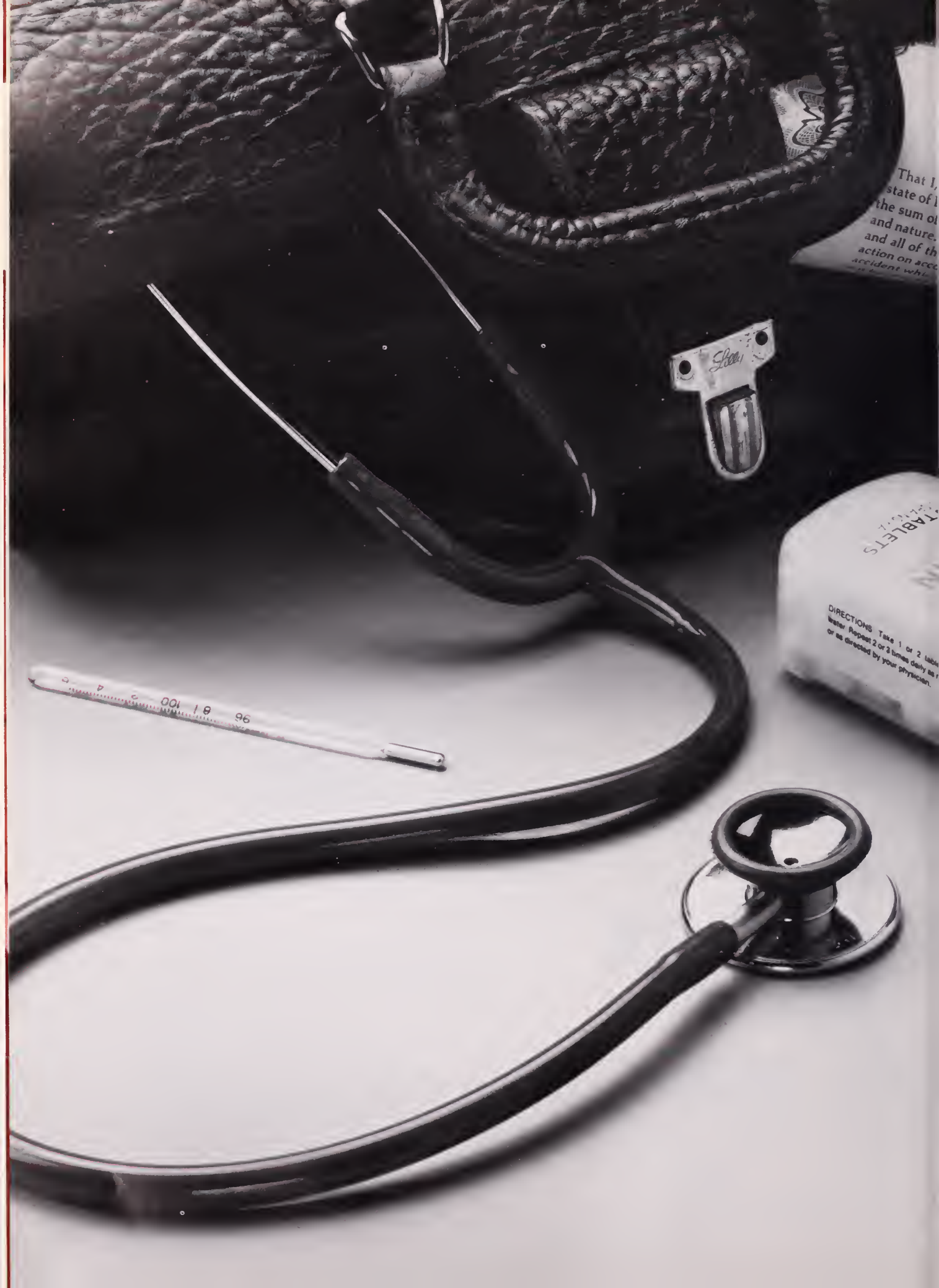
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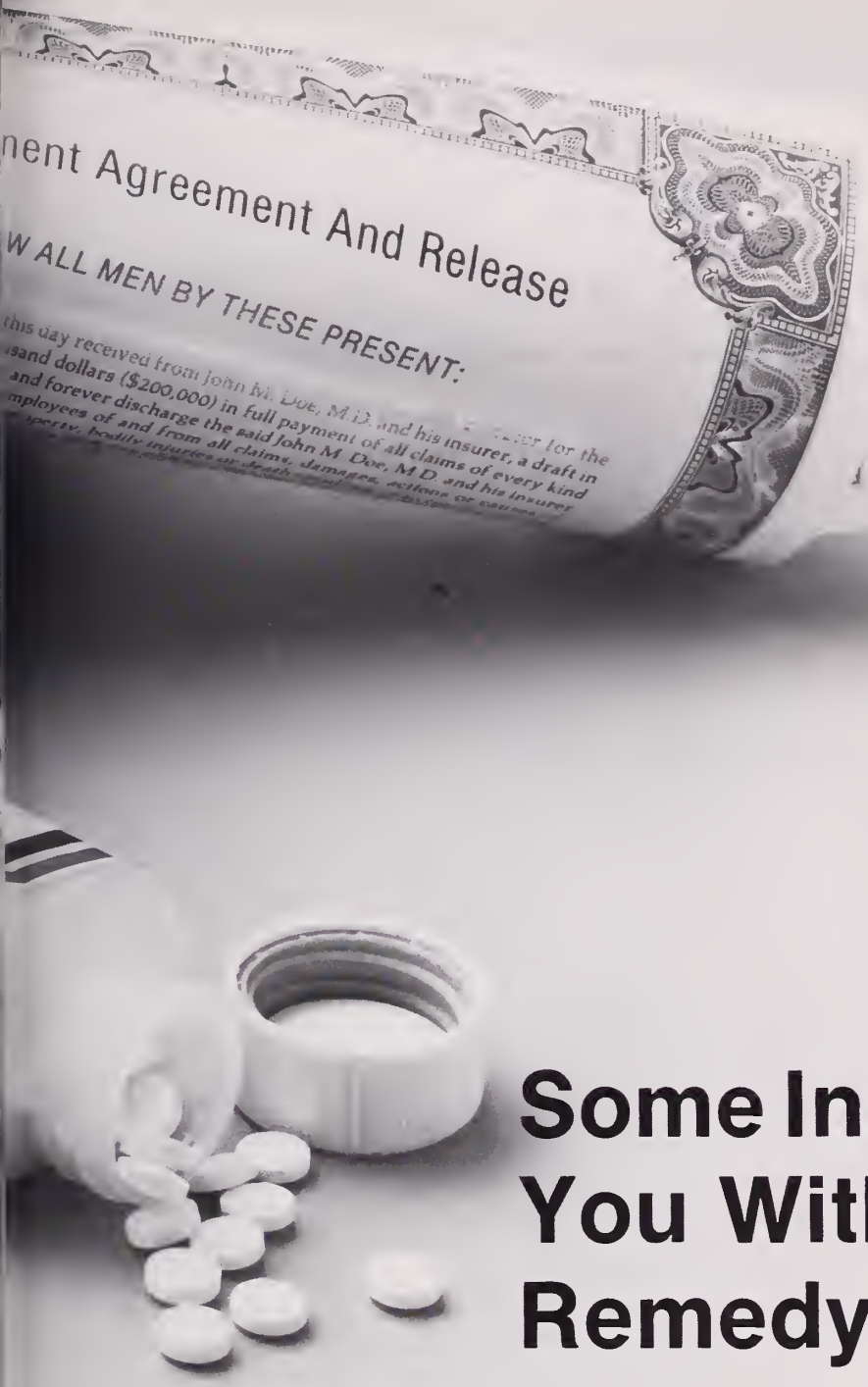
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EDITORIAL

Change and No Change

HAPPY birthday! In June, 1903, 80 years ago, Volume 1 No. 1 of the *Bulletin of the Kentucky State Medical Association* was published. To celebrate the occasion, let's take the liberty of browsing through past editions of the *Journal*. Change is with us, but some things never seem to change.

Consider this excerpt from the *editorial salutatory* of the first issue of this journal: "in other words, instead of a much delayed volume of transactions the papers will be published monthly, three or four at a time and will appear so persistently and in such a live form that they will be received with much greater interest and anticipation than the old volume of transactions."

Of more than passing interest in Volume 1 are the advertisements. Cadillac automobiles are $750.00. The R. F. Vogt Tobacco Company, greatest cigar and tobacco house in the southwest, offers cigars for the physician.

Editorial license permits us to jump our historical review of the *JOURNAL* at 20-year intervals. The time is February 1923, and in the Kentucky Medical Journal is an official announcement by Stuart Graves, M.D., Acting Dean of the University of Louisville School of Medicine. Doctor Graves writes: "Changes which will immediately improve the University of Louisville, especially its School of Medicine, and which are pregnant with promise of future strength and development, have just been announced." Among these changes was a new agreement between the authorities of the city charged with the responsibility for the welfare of the Louisville City Hospital and the authorities of the University charged with the responsibility for the welfare of the medical school. [An old but familiar tune].

On a more scientific note, Doctor William Young in the October 1923 issue, in considering uterine cancer states, "Most patients with cervical or uterine carcinoma that I see have reached the inoperable stage. Within the last two years, I have not seen a case of cancer of the cervix or uterus which was considered operable." [Some things do change and for the better].

The time is March 1943, and war survival is paramount. Doctor Emmet F. Horine, eminent spokesman for medicine, discusses *Medical Trends in the United States*. His words are prophetic. "The recent poll directed by Roper for *Fortune* disclosed that 74.3% of our inhabitants thought the government should collect enough taxes after the war to furnish medical care for everyone. Ordinarily I am far from pessimistic, but the more I have studied and thought of our present plight, the more convinced I am of the probability of total state medicine."

But again, as a reminder that some things do change, we find in the July 1943 issue of the *Journal* an article entitled "Colloidal Gold Reaction of Serum from Patients With Disease of the Liver" by one Captain Herbert L. Clay, Medical Corp., Army of the United States.

The 1963 Volume of the *Journal of the Kentucky Medical Association* was missing from the library; 1962 was an interesting year, however. In the January 1962 issue of the *Journal of the Kentucky Medical Association*, Doctor Sam Overstreet in an editorial prophesied: "During the past fifteen years, there has been an increasing awareness of a physician shortage throughout the United States. It has become apparent to everyone that our supply is falling far short of the demand, even for the present time, and may be critical within a few years." One month later in the February issue, the Student AMA President of the University of Louisville states: "It is common knowledge that the number of medical graduates each year is not sufficient to keep up with the growth of the population and this has intensified greatly the problem of proper medical care in the United States." [Twenty years and 20 medical schools later, we are told that there is shortly to be a surplus of physicians. It has been predicted that in the year 2000 there will be between 800,000 and 900,000 practicing physicians in these United States. Some projections do change].

And finally, we are told in August 1962 that the incidence of syphilis is increasing after a notable 25 year decline. [And some things never seem to change].

G. Randolph Schrodt, M.D.

Roche salutes the history of Kentucky medicine



THE DOCTOR WHO PIONEERED ABDOMINAL SURGERY

Dr. Ephraim McDowell

In 1795, Dr. Ephraim McDowell of Virginia settled in the village of Danville, Kentucky. His practice took him on horseback over hundreds of miles of wilderness.

Nevertheless, his reputation as a skillful and successful surgeon spread—especially for lithotomies, which he performed 22 times without losing a patient.[1]

First ovariotomy

McDowell's true moment in history came in 1809, when he performed the first known ovariotomy for removal of a tumor from Jane Crawford, then 47. The procedure was completed in 25 minutes, and Mrs. Crawford not only recovered but lived to age 78.[1,2]

This landmark surgery was performed under the most primitive conditions—without anesthesia or antisepsis—while, the story is told, brave Mrs. Crawford distracted herself as best she could by singing hymns.[2]

His published reports of this case, along with two others in 1817 and an additional two in 1819, established Dr. McDowell as the physician who saved women afflicted with ovarian disease from their previously hopeless situation and, further, marked the beginning of abdominal surgery.[1] To European medical practitioners, Dr. McDowell's accomplishments offered clear evidence that medicine was coming of age in America.[3]

References: 1. Garrisan FH. *An Introduction to the History of Medicine,* 4th ed. Philadelphia, W. B. Saunders Company, 1929, pp. 507-508. **2.** Packard FR. *History of Medicine in the United States,* vol. II. New York, Hafner Publishing Company, 1963, pp. 727-728. **3.** Shaftel N. The evalution of American medical literature, in *History of American Medicine,* edited by Marti-Ibañez F, New York, MD Publications, 1959, p. 106



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When the history reveals anxious depression...

For the estimated 70 percent of nonpsychotic depressed patients who are also anxious,[1] Limbitrol provides both amitriptyline, specific for symptoms of depression, and the effects of Librium® (chlordiazepoxide HCl), the tested and dependable anxiolytic. Limbitrol is, therefore, a better choice for these patients than dual agents that contain a phenothiazine, a class of antipsychotic drugs used infrequently in nonpsychotic patients.[1]

62% of Overall Improvement...Within the First Week

Limbitrol also has a rapid onset of action which may lead to greater patient compliance. In a multicenter study, patients taking Limbitrol experienced 62% of their overall improvement within the first week of therapy.[2]

In another multicenter study,[3] the following symptoms associated with anxious depression were significantly reduced during the first two weeks of therapy:

- ☐ Headache—79%
- ☐ Early insomnia—91%
 Middle insomnia—87%
 Late insomnia—89%
- ☐ Gastrointestinal upset—73%

In two multicenter studies, only 1.9% of Limbitrol patients experienced cardiovasculor side effects.[3]

Patients should be cautioned about the combined effects with alcohol or other CNS depressants and about activities requiring complete mental alertness such as operating machinery or driving a car.

References: 1. Rickels K: Drug treatment of anxiety, in *Psychopharmacology in the Practice of Medicine,* edited by Jarvik ME, New York, Appleton-Century-Crofts, 1977, p. 316. **2.** Feighner JP *et al: Psychopharmacology 61*:217-229, Mar 1979. **3.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ

In moderate depression and anxiety

Limbitrol® 5/12.5 10/25

Tablets 5-12.5 each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)
Tablets 10-25 each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt)

Please see summary of product information on following page.

LIMBITROL® TABLETS Ⓝ Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use, then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).
Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated. Sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.
Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50

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Health and Safety Tip From the American Medical Association

MARKERS LISTED TO IDENTIFY ALCOHOLICS

How can you tell that a regular, heavy drinker has crossed over the line and become an alcoholic, who no longer can control his or her drinking?

The American Medical Association in its Manual on Alcoholism points to some markers to help identify the alcoholic.

1. Increasing consumption of alcohol, with frequent, perhaps unintended, episodes of intoxication.

2. Drinking to handle problems or relieve symptoms.

3. Obvious preoccupation with alcohol and the frequent need to have a drink.

4. Surreptitious drinking or gulping of drinks.

5. Tendency toward making alibis and weak excuses for drinking.

6. Refusal to concede what is obviously excessive consumption and expressing annoyance when the subject is mentioned.

7. Frequent absenteeism from the job, especially following weekends and holidays.

8. Repeated changes in jobs, particularly if to successively lower levels, or employment in a capacity beneath ability, education and background.

9. Shabby appearance, poor hygiene, and behavior and social adjustment inconsistent with previous levels or expectations.

10. Persistent vague physical complaints without apparent cause, particularly insomnia, stomach upsets, headaches, loss of appetite.

11. Multiple contacts with the health care system with disorders that are alcohol caused or related.

12. Persistent marital and family problems, perhaps with multiple marriages.

13. History of arrests for drunkenness or drunken driving.

Submitted by the KMA Impaired Physicians' Committee

OFTEN INSEPARABLE: PAIN AND ANXIETY

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Pain—triggering anxiety—which accentuates the perception of pain...together they're worse than either alone. And since they're usually both present in musculoskeletal disorders, the best therapy is often a combination of analgesic and anxiolytic agents. Equagesic ® -M combines the pain relief of aspirin with the tension-reducing properties of meprobamate—because together they're better than either alone.

See important information on next page.

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Proven superior to aspirin alone in controlled clinical trials

(BRIEF SUMMARY)

DESCRIPTION: Each tablet contains 200 mg meprobamate and 325 mg aspirin.

INDICATIONS: Adjunct in short-term treatment of pain accompanied by tension and/or anxiety in patients with musculoskeletal disease. Clinical trials demonstrated in these situations relief of pain is somewhat greater than with aspirin alone. Effectiveness in long-term use, i.e. over 4 months, has not been assessed by systematic clinical studies. Physicians should periodically reassess usefulness of drug for individual patients.

CONTRAINDICATIONS: ASPIRIN: Allergic or idiosyncratic reactions to aspirin or related compounds. MEPROBAMATE: Acute intermittent porphyria, allergic or idiosyncratic reactions to meprobamate or related compounds, e.g. carisoprodol, mebutamate, or carbromal.

WARNINGS: ASPIRIN: Use salicylates with extreme caution in patients with peptic ulcer, asthma, coagulation abnormalities, hypoprothrombinemia, vitamin K deficiency, or those on anticoagulants. In rare instances, aspirin in persons allergic to salicylates may result in life-threatening allergic episodes. MEPROBAMATE: DRUG DEPENDENCE: Physical and psychological dependence, and abuse have occurred. Chronic intoxication from prolonged ingestion of, usually, greater than recommended doses is manifested by ataxia, slurred speech, and vertigo. Therefore, carefully supervise dose and amounts prescribed and avoid prolonged use, especially in alcoholics and others with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of preexisting symptoms, e.g. anxiety, anorexia, or insomnia, or withdrawal reactions, e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and, rarely, convulsive seizures. Such seizures are more likely in persons with CNS damage or preexistent or latent convulsive disorders. Onset of withdrawal symptoms occurs usually within 12 to 48 hours after discontinuation; symptoms usually cease within next 12-to-48-hour period. When excessive dosage has continued for weeks or months, reduce dosage gradually over 1 to 2 weeks rather than stop abruptly. Alternatively, a short-acting barbiturate may be substituted, then gradually withdrawn.

POTENTIALLY HAZARDOUS TASKS: Warn patients meprobamate may impair mental or physical abilities required for potentially hazardous tasks, e.g., driving or operating machinery.

ADDITIVE EFFECTS: Since CNS-suppressant effects of meprobamate and alcohol or meprobamate and other psychotropic drugs may be additive, exercise caution with patients taking more than one of these agents simultaneously.

USAGE IN PREGNANCY AND LACTATION. An increased risk of congenital malformations associated with minor tranquilizers (meprobamate, chlordiazepoxide, and diazepam) during first trimester of pregnancy, has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. The possibility that a woman of childbearing potential may be pregnant at time of institution of therapy should be considered. Advise patients if they become pregnant during therapy or intend to become pregnant to communicate with their physicians about desirability of discontinuing the drug.

Meprobamate passes the placental barrier. It is present both in umbilical cord blood at or near maternal plasma levels and in breast milk at lactating mothers at concentrations two to four times that at maternal plasma. When use of meprobamate is contemplated in breastfeeding patients, consider the drug's higher concentrations in breast milk as compared to maternal plasma levels.

USAGE IN CHILDREN: Keep preparations with aspirin out of reach of children. Equagesic®-M is not recommended for patients 12 years of age and under.

PRECAUTIONS: ASPIRIN: Salicylates antagonize uricosuric activity of probenecid and sulfinpyrazone. Salicylates are reported to enhance hypoglycemic effect of sulfonylurea antidiabetics. MEPROBAMATE: Use lowest effective dose, particularly in elderly and/or debilitated, to preclude over-sedation. Meprobamate is metabolized in the liver and excreted by the kidney; to avoid excess accumulation exercise caution in its use in patients with compromised liver or kidney function. Meprobamate occasionally may precipitate seizures in epileptic patients. It should be prescribed cautiously and in small quantities to patients with suicidal tendencies.

ADVERSE REACTIONS: ASPIRIN: May cause epigastric discomfort, nausea, and vomiting. Hypersensitivity reactions, including urticaria, angioneurotic edema, purpura, asthma, and anaphylaxis may rarely occur. Patients receiving large doses of salicylates may develop tinnitus.

MEPROBAMATE: CNS: Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impairment of visual accommodation, euphoria, overstimulation, paradoxical excitement, fast EEG activity.

GI: Nausea, vomiting, diarrhea.

CARDIOVASCULAR: Palpitation, tachycardia, various forms of arrhythmia, transient ECG changes, syncope, hypotensive crisis.

ALLERGIC OR IDIOSYNCRATIC: Milder reactions are characterized by itchy, urticarial, or erythematous maculopapular rash, generalized or confined to the groin. Other reactions include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy, fever, fixed drug eruption with cross-reaction to carisoprodol, and cross-sensitivity between meprobamate/mebutamate and meprobamate/carbamal. Rare, more severe hypersensitivity reactions include hyperpyrexia, chills, angioneurotic edema, branchospasm, oliguria, and anuria. Also, anaphylaxis, exfoliative dermatitis, stomatitis, and proctitis. Stevens-Johnson syndrome and bullous dermatitis have occurred.

HEMATOLOGIC (SEE ALSO "ALLERGIC OR IDIOSYNCRATIC"): Agranulocytosis, aplastic anemia have been reported, although no causal relationship has been established, and thrombocytopenic purpura.

OTHER: Exacerbation of porphyric symptoms.

DOSAGE AND ADMINISTRATION: Usual dose is one or two tablets, 3 to 4 times daily as needed for relief of pain when tension or anxiety is present. Not recommended for patients 12 years of age and under.

OVERDOSAGE: Treatment is essentially symptomatic and supportive. Any drug remaining in the stomach should be removed. Induction of vomiting or gastric lavage may be indicated. Activated charcoal may reduce absorption of both aspirin and meprobamate. Aspirin overdosage produces usual symptoms and signs of salicylate intoxication. Observation and treatment should include management of hyperthermia, specific parenteral electrolyte therapy for ketoacidosis and dehydration, watching for evidence of hemorrhagic manifestations due to hypoprothrombinemia which, if it occurs, usually requires whole-blood transfusions. Suicidal attempts with meprobamate have resulted in drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Some suicidal attempts have been fatal. The following data, reported in the literature and from other sources, are not expected to correlate with each case (considering factors such as individual susceptibility and length of time from ingestion to treatment), but represent usual ranges reported. Acute simple overdose (meprobamate alone): Death has been reported with ingestion of as little as 12 gram meprobamate and survival with as much as 40 gram.

BLOOD LEVELS:

0.5-2.0 mg percent represents usual blood-level range after therapeutic doses. The level may occasionally be as high as 3.0 mg percent.

3-10 mg percent usually corresponds to findings of mild-to-moderate symptoms of overdosage, such as stupor or light coma.

10-20 mg percent usually corresponds to deeper coma, requiring more intensive treatment. Some fatalities occur.

At levels greater than 20 mg percent, more fatalities than survivals can be expected.

Acute combined overdose (meprobamate with other psychotropic drugs or alcohol): Since effects can be additive, history of ingestion of a low dose of meprobamate plus any of these compounds (or of a relatively low blood or tissue level) cannot be used as a prognostic indicator.

In cases of excessive doses, sleep ensues rapidly and blood pressure, pulse, and respiratory rates are reduced to basal levels. Any drug remaining in stomach should be removed and symptomatic treatment given. Should respiration or blood pressure become compromised, respiratory assistance, CNS stimulants, and pressor agents should be administered cautiously as indicated. Diuresis, osmotic (mannitol) diuresis, peritoneal dialysis, and hemodialysis have been used successfully in removing both aspirin and meprobamate. Alkalinization of the urine increases excretion of salicylates. Careful monitoring of urinary output is necessary, and caution should be taken to avoid overhydration. Relapse and death, after initial recovery, have been attributed to incomplete gastric emptying and delayed absorption.

HOW SUPPLIED: Bottles of 50 scored tablets.

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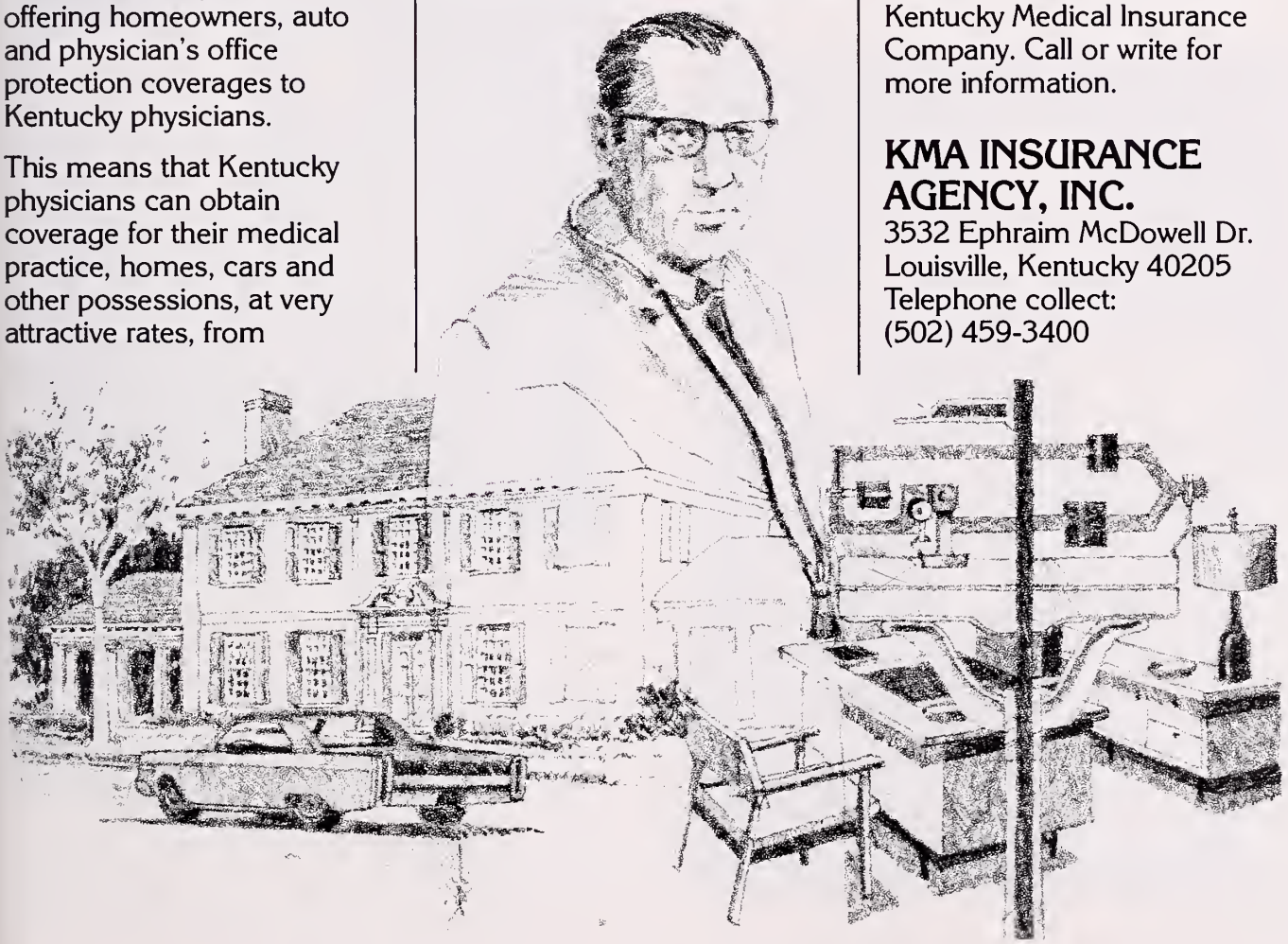
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David L. Stewart, M.D.

DAVID L. Stewart, M.D., is Chairman of the KMA Committee that deals with a serious problem—the physician who is impaired through substance or organic deficiencies to the point where he is a danger to his patients or self.

Recently, the Impaired Physicians' Committee and its members came under attack from the Courier-Journal for allegedly endangering the lives of the public by safeguarding the privacy of impaired physicians.

The allegations in the story are harsh and describe what some would believe to be a typically self-serving interest group. Doctor Stewart's story is quite different. He explains that the Impaired Physician's Committee is not a punitive committee. It has no administrative powers. Flexibility of action is what rules the members who are dealing with intangible evidence. "The things that cause special concern are very seldom known as established fact. When we get information about a possibly impaired member, it may be anonymous or based on hearsay so we are not in a position to report it officially to anybody," says Doctor Stewart.

The purpose of the committee is where confusion and discrepancy occur. The newspaper article attempted to assign the committee a role it was never intended to fulfill—that of a policing and reporting mechanism.

Violation of Kentucky's Medical Practice Act is one charge brought against the committee. It states that physicians and medical societies, among others, are required to give the medical licensure board a written report about physicians who are "known or observed" violators of any of the act's 33 sections. Doctor Stewart replies that, "It is the task of the physician's family, of his practice associates, of his fellow members of the hospital staff and of his county medical society to deal with the medical board before we contact them. The view of the Courier-Journal is that of an outsider who



doesn't understand this relationship. Secondly, it was suggested that we know of physicians who are guilty of the offenses cited when actually we have just heard, as countless others both in and out of the profession, that maybe something has taken place. Again, it is important to understand that we are scarcely in a position to report such episodes to the Board as established fact.

Strict confidentiality is a key element to the Impaired Physicians' Committee's operations. They believe that

more physicians will be encouraged to cooperate only if confidentiality is maintained. This is why no records are kept. "It is the Board of Medical Licensure's role to determine if someone is in violation of the laws and should be reported. The Committee thinks it best to have a sort of informal relationship with them. The Board has the administrative power. Our interest is in maintaining trained, skilled, experienced physicians in practice and we don't want to see any of them lost," says Doctor Stewart.

Disappointment is Doctor Stewart's first reaction to the article in the Courier-Journal. "I was disappointed in what I was hoping would be a real search for objectivity. Although I take no offense with the article there are errors of omission and errors in interpretation. In some cases, material which may have weakened the point that was trying to be made was not included. There was much in the article that was true and even helpful and we hope to capitalize on whatever

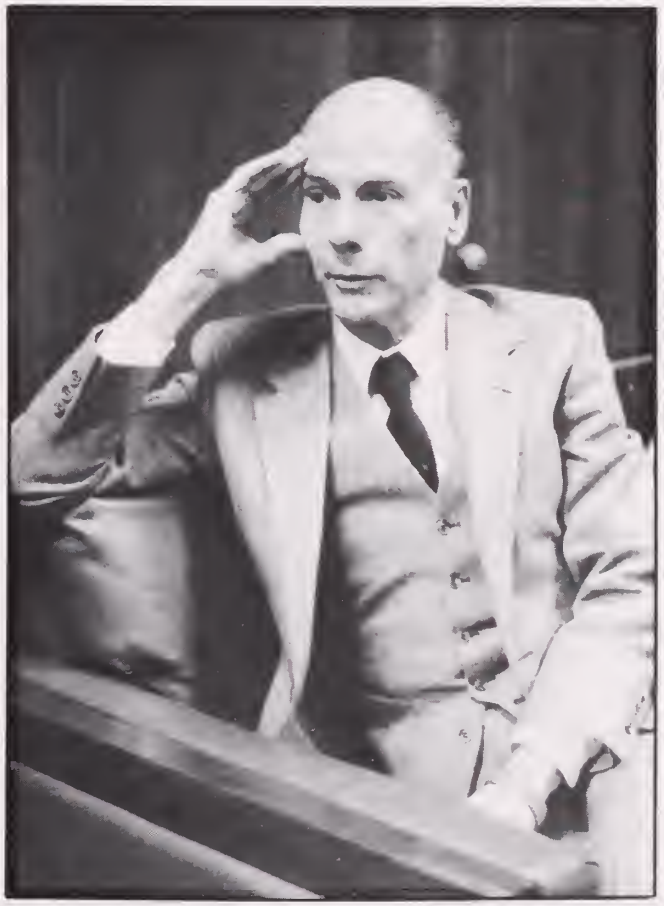


"Our interest is in maintaining trained, skilled, experienced physicians in practice and we don't want to see any of them lost."

publicity we received even if it was negative. There is no secrecy to our operation beyond the confidential details of the physicians that come to our attention. The dissemination of as much information as possible does have a positive aspect. No one would probably ever agree completely with something someone else wrote about him. On the other hand, while the committee is not perfect and we certainly have some shortcomings, I feel like a lot of good has been accomplished. The good far outweighs the shortcomings."

Doctor Stewart is on the medical staff at Our Lady of Peace and has been Chairman of the Impaired Physicians' Committee for six years. He was also Clinical Director of the Substance Abuse Program at Our Lady of Peace Hospital and is on the Editorial Board of the *Journal of the KMA*. As Chairman of the Committee, Doctor Stewart is full of praise for its members and their work. The committee is comprised of psychiatrists along with physicians from other specialties who are themselves former substance abusers, or recovering physicians as they prefer to be called. Regardless of how long they have been abstinent they will always refer to themselves as recovering.

Doctor Stewart explains how the strength of the committee comes from these members. "These people



are marvelous folks. They are essential because they can confront a troubled physician without guile, without apology. They can say to the troubled physician, 'Don't give me any excuses, I've used them all myself.' We are grateful for their insights and special qualities."

When the committee or one of its members hears about a physician who may need help, a number of approaches may be used. Doctor Stewart elaborates. "We may contact a KMA trustee or other dependable physician in the area who would have knowledge of this person. We may also contact the family. We have even called physicians before the committee and simply told them we were concerned about their health. More often we ask the physician to come by and talk with us. We don't want him to consider this pressure in the ordinary sense of the word. We like to think of it as favorable influence and that these folks decided it was in their interest to seek help."

Doctor Stewart has not only helped others professionally throughout his career, but personally through his work as a medical missionary. He spent 10 years in Central Africa with his first wife, Laura, who died in 1979. Three of his four children were born there and received most of their early education from Mrs. Stewart.

Doctor Stewart still works for various mission boards, doing preappointment evaluations for candidates for missionary service and teaching continuing medical education courses to American doctors overseas. He is currently Chairman of the Commission of Continuing Medical Education, Christian Medical Society. The goal of the organization is to make current medical knowledge available to missionary physicians. These courses are given official Category I credit through the University of Louisville School of Medicine. "The people who come to the symposium," says Doctor Stewart, "are able to claim this credit quite properly. We have a very intensive course for eight or nine days with about eight hours a day of formal lectures. This way an individual can get all of his 60 hours of Category I credit at once."

In 1982, Doctor Stewart married Doctor Martha Gilliand, a specialist in obstetrics and gynecology. She is also a missionary physician. Both doctors traveled to Malaysia this winter to teach CME courses.

Doctor Stewart has three sons and one daughter. His daughter, Ann, was married a few months ago to a physician in internal medicine. Two of his sons, Dave and Dick, are in business together in Louisville and his other son, Bob, is a psychiatrist in practice at Our Lady of Peace Hospital. He is also Clinical Director of the Youth Treatment Services at the hospital.



Doctor Stewart's favorite pastime is sailing. "I'm afraid that it is more of an obsession with me than anything else. I charter a boat usually in the Carribean, for a week. My family usually goes with me and sometimes I have taken a Sunday school class sailing."

If it is possible for Doctor Stewart to disassociate himself from his role as Chairman of the Impaired Physicians' Committee and objectively view their work he would describe the committee as one of goodwill. "We are dealing with a very slippery kind of problem for which there are no clearly defined handles. We have a special problem in wanting to be both influential and gentle. We want everyone to be aware of us, but we want to keep a low profile. We would like to be able to do all the things that are necessary to be effective and yet we don't want to make folks mad. But it is an imperfect world so we will keep working as a marvelously sincere, hard-working, well-meaning committee."

Text and Photos Donna M. Young

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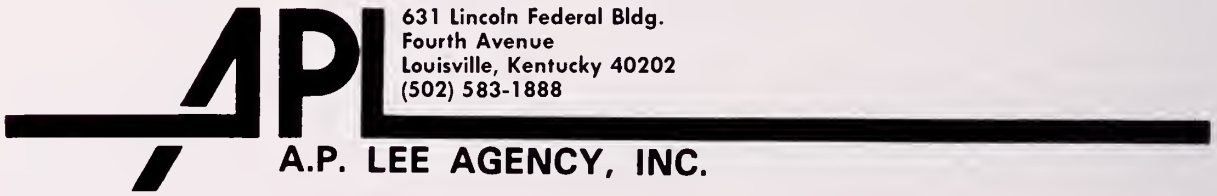
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Help For The Impaired Physician

THIS is a plea for help. There is in our state a significant number of our colleagues who are impaired or disabled and yet continue to practice. While some have problems such as senility and other physical or emotional limitations, approximately 90% of these are either dependent and/or destructive abusers of alcohol and/or other drugs. These physicians need our help. This is our moral and practical responsibility.

In 1976, the Impaired Physician's Committee of the KMA was begun. Through the efforts and results of similar committees in other states, such as Georgia, Tennessee, Minnesota and Wisconsin, we have learned a lot since 1976. It is now time for us to become as effective as they in dealing with our problem physicians. To do this, it is critical that we have the cooperation and assistance of the medical community across the state.

The first step is the identification of an impaired colleague, and it is here that the Committee and that physician must have your help. We need you to let us know who is sick. Sometimes this is a difficult thing to do—inform a "committee" that a friend and/or fellow physician cannot function. Since this loss of function is usually, as was noted earlier, due to alcohol and/or other drug dependence or abuse, you will encounter an individual blinded with the denial that he has a problem and the delusion that he can either handle it alone or with improper and inappropriate help. Do not succumb to these manipulative ploys. Inform us of your concern, and let us deal with this individual and his problem appropriately. You may reach us through the KMA, telephone (502) 459-9790.

The second step is the confidential handling of the information which we receive. Members of the Committee will discreetly gather facts regarding the identified impaired colleague. If the facts do substantiate that a problem exists, then the Committee, armed with these facts, will confront the impaired physician and, hopefully, intercede in the continued negative progression of his disease and impairment.

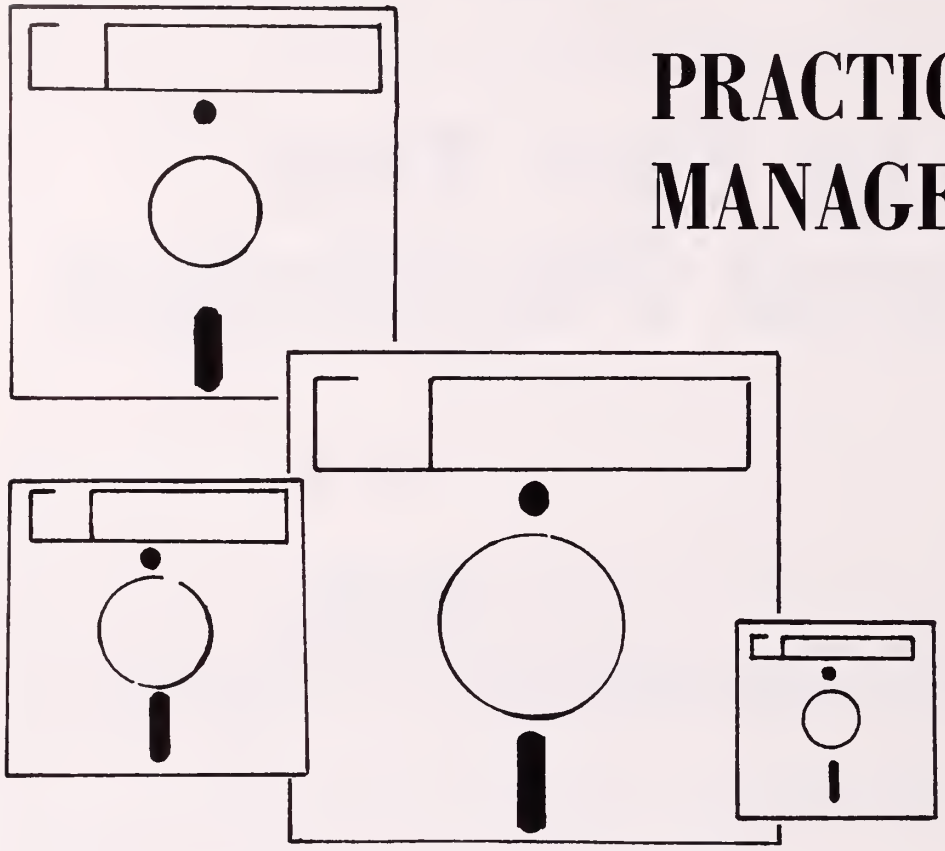
The third step involves the selection of the appropriate treatment for each individual. This is critical. Inappropriate treatment can oftentimes be as devastating as no treatment at all. We have made the contacts to assure the impaired physician the best possible treatment.

The final step is the aftercare commitment which the Committee on Impaired Physicians will make to each recovering physician. The recovery process in the treatment of chemical dependency is a continuous, evolving, restructuring of the affected individual's life. Its uncompromised prerequisite is total abstinence from personal chemical usage. We know that the first two years are the most critical and difficult. Therefore, we supervise closely this period.

Chemical dependency is treatable. Currently, appropriate treatment, 70 to 80% of physicians with a chemical dependency problem can recover to abstinence and happy living. Your Committee has such physicians on it. We know the hell of this disease, and we know the joy of recovery. We know how to help effectively and properly. Help us to help those who need our help. We truly can be and should be our brother's keeper.

Burns M. Brady, M.D.
Member, Impaired Physicians' Committee

SPECIAL ARTICLE



PRACTICE MANAGEMENT

Purchasing Hardware

The computer market is now inundated with computer systems; all with a different application, style and capability. Selection of the appropriate hardware is second only to the purchase of software and requires careful consideration.

There are many good computer systems on the market containing the latest technology, but in many cases they do not all run the software applications you will need to accomplish your goals. Many individuals buy a particular hardware because of the company's reputation and not for what it can do for them. After the purchase, the user tries to make the system work. This approach is very expensive and should only be considered if there are not any available packages to handle your needs.

After you have analyzed your office needs and have your office organization running smoothly you would be ready to begin considering the selection of a computer service. In your review of hardware you should consider the following:

1. Produce a systems analysis either developed by you and your staff or from a third party computer consultant who is not aligned with a particular vendor. Although a consultant may cost from $40-$85 per hour, this initial investment will be well worth the expense.

 Your analysis should include:

 - estimated minimum size of memory needed to carry out current applications (jobs required),
 - whether or not you want multiple users,
 - minimum number of work stations (terminals) plus maximum number possible,
 - initial amount of on-line storage needed and amount expected to be utilized over the next 3 years, type of storage media,
 - types of printers needed to carry out application requirements,
 - software applications.

 Your systems analysis will provide you with a document that will enable you to obtain bids from local computer companies to begin your comparison.
2. Contact the local reputable computer firms in your area. Check with your Better Business Bureau and the State Medical Association for references. The manufacturer can inform you of the OEM's (Office Equipment Merchandisers) that market their equipment and specialize in medical applications in your

area. An OEM will provide you with a system configuration that will provide the hardware that will run your software. The major computer companies will almost always work through an OEM for sales less than $100,000. This is mainly due to their lack of a sales force to cover all requests and because they usually do not maintain software packages for the hundreds of applications. Thus they rely on the OEM, whose main business is software sales. Many companies do have general pre-developed software packages *eg*, word processing, that they will sell with systems, but you will need to obtain specific software from another source. Try to work with an OEM that has its operations in your state and has proven experience in medical applications. Working with a company outside these boundaries may create some problems.

3. Request that the OEM give you a written bid based on your "Proposal for Bid." If you have the time to review each system specified, then it is recommended that you do so. However, each review requires a considerable amount of time and you may wish to wait until you have reduced your initial selection to three systems. In your proposal be sure to include the following questions to be answered by the vendor about the hardware:

 A. Maximum Number of:
 - programs that can run at one time
 - work stations that will function and at what speed they access the computer (*eg:* 1 to 3 seconds or 30 seconds or more)
 - printers and their type—can other manufacturers' printers be supported on this equipment
 - peripheral devices (tape, floppy disk, hard disk, etc.)

 B. Maintenance
 - cost for full coverage, basic coverage
 - amount of down time to be expected
 - average response time for service
 - location of service office

 C. System History
 - who in the immediate area is using this system (request the OEM to provide their customer list in order for you to select references to contact)
 - how long this particular hardware has been on the market. If it is a new generation just off the assembly line, you may be in store for a number of technical problems. Pick a system that has been in production for at least one to two years. Many systems today are third or fourth generation systems that have been refined and should be considered.

 D. Hardware Configuration/Needs
 - physical dimensions of all equipment
 - special environmental needs
 - special electrical needs
 - cost of supplies (media, ribbons etc.)
 - support equipment (stands for terminals, storage cabinets for media)

 E. Training on Hardware Use
 - how easy to operate
 - basic trouble shooting
 - office staff maintenance of system

 After you have obtained the vendor's bid, compare the results for functionality, cost and availability. The product may be what you want but may not be available for six months to a year. You must determine if you are willing to wait that long. Normal delivery of a system should be within 90 days.

4. Select three vendors that meet your needs and ask them to demonstrate their product. Have your primary staff users participate in the demonstration and actually have a "hands on" experience. Make sure the vendor shows you the hardware needs (which switches to turn on, buttons to push, media to load in what places and printer and terminal functions.) Have the vender load the system down with a number of jobs and data. This will give you a good idea of the memory capacity and disk speed access of data. One company may be a little higher in price but their hardware may do the job twice as fast. When introducing a computer into your office it is recommended that the system with the fastest data access be considered. Delays in accessing data of 15-30 seconds can cause a backlog. Should you decide on a system that runs on only floppy diskettes, you may be trading speed for savings, which would not be a savings if your staff has to spend time changing media and accessing data. It is more advantageous to initially invest in a larger on-line storage area to maximize both your computer resource and your personnel.

Other questions to consider:

Should I buy the same hardware as a fellow colleague?

Answer: Although an endorsement from a colleague may be a criteria for selection, it should not be the sole determining factor. A system that is right for one

individual may not be right for you. Take the time to review all options available to you.

How much should I plan to spend on hardware?

Answer: Don't underbuy. One of the major mistakes that business people make is not investing sufficient resources to obtain what is really needed for a successful operation. Have an evaluation done. Determine your minimum needs, but don't buy a system that will meet just these needs. If you do, it will leave you dissatisfied in the near future.

How do you know if you have a good price?

Answer: Compare your "Proposals for Bid." A ballpark figure for a solo practitioner with basic needs may be between $15,000 and $20,000, but could be higher or lower depending on actual needs. A small group of more than three physicians could expect to invest approximately $10,000-$12,000 each. The cost for the purchase of a system will be proportionately less with an increased number of physicians participating.

Besides hardware and software costs, consider all costs for the system's supplies and maintenance. A system that may have a good initial cost but is expensive to maintain would not be a good investment.

What type of media should I use for storage?

Answer: Whatever is the most economical. This should be one factor that you should review with the vendor. Check the amount of time it takes to back up your records. Do you have to shut the system down to do backup? What is the cost of the media to store your records on? If it is expensive it could have a major impact on your investment.

Who will train the staff or key staff person on the hardware operation?

Answer: Check with the OEM but insist that a technical person provide the training. Don't rely on the salesperson. Require the vendor to provide assistance for hardware user support as well as software support for 90 days as part of the warranty. Make sure the staff again has "hands-on" simulated drills on minor trouble shooting problems that can be easily handled in the office. This one procedure could save you valuable time and headaches. Should problems occur, it will enable your staff to quickly evaluate them and determine whether a technician is needed.

How do you know whether to lease or purchase the hardware?

Answer: Only you and your accountant can really determine the answer, but there are some items to consider. 1) Who is the company offering the lease? Are they financially stable? 2) Will you save with a purchase? 3) If you lease, for what period of time? Note, if you cancel or lease, you would still need some system, either manual or computer, to run your office and the change over would be expensive.

What about hardware becoming outdated?

Answer: The major technological changes occurring are in the size of the system, its processing speed and storage capabilities. The basic computer hardware is reliable and will continue to provide good service after 10 years of use if maintained on a service contract. This maintenance will make it easier to sell the system when you decide to update. The major reason most companies update is that they outgrow their system. Careful planning will avoid that.

In conclusion, hardware selection is the second most important consideration in the purchase of a computer system. A good detailed analysis of your needs will direct you to the appropriate hardware. But remember, it must be able to run the software you select to handle your applications. Make sure your purchase contract includes vendor responsibilities on hardware requirements and needs. Next month we will explore the purchasing of software.

This is the third in a series of articles by Joe Witherington, Jr., System Manager for KMA and KMIC.

Anxious patients improve in just a few days



And what is more reassuring to an excessively anxious patient than medication that promptly starts to relieve his discomforting symptoms? Valium® (diazepam/Roche) begins working within 30 to 90 minutes. Patients continue to improve in just a few days, and relief continues throughout the course of treatment.

There are other important benefits with Valium as well—along with its broad clinical range, Valium has an efficacy/safety profile that few, if any, drugs can match. This record has been achieved with extensive clinical experience, undoubtedly including yours. And, as you must have observed, side effects more serious than drowsiness, fatigue or ataxia rarely occur. Nevertheless, as with any CNS-acting agent, patients should be cautioned about driving, operating hazardous machinery or ingesting alcohol or other CNS-depressant drugs while taking Valium.

Yet another benefit Valium affords is flexibility. Available in 2-mg, 5-mg and 10-mg scored tablets, Valium enables you to titrate dosage to individual patient needs. For the geriatric patient, a starting dosage of 2 to 2½ mg once or twice a day is recommended. And, for patients who forget or skip medication, you can prescribe Valrelease™ (diazepam/Roche) 15-mg slow-release capsules, knowing that Valrelease will assure all the benefits of Valium 5 mg *t.i.d.* with the convenience of once-a-day dosage.

Discontinuation of Valium (or Valrelease) is typically as smooth as its start in short-term therapy. However, Valium and Valrelease should be discontinued gradually after more extended treatment. As you diminish dosage, the built-in tapering action of Valium and Valrelease will help avoid rapidly recurring anxiety symptoms and symptoms of withdrawal, and will help ease the patient's transition to independent coping when therapeutic goals have been achieved.

...that's one of the unique benefits of

Valium®

diazepam/Roche

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For a summary of product information, please turn the page.

ROCHE®

Valium® (diazepam/Roche) Ⓝ Tablets
Valrelease™ (diazepam/Roche) Ⓝ slow-release Capsules
Injectable Valium® (diazepam/Roche) Ⓝ

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of anxiety disorders, or short-term relief of symptoms of anxiety. Anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic. Symptomatic relief of acute agitation, tremor, impending or acute delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: relief of skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome. *Oral forms* may be used adjunctively in convulsive disorders, but not as sole therapy. *Injectable form* may also be used adjunctively in: status epilepticus; severe recurrent seizures; tetanus; anxiety, tension or acute stress reactions prior to endoscopic/surgical procedures; cardioversion.

The effectiveness of diazepam in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindications: Tablets or capsules in children under 6 months of age; known hypersensitivity; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: As with most CNS-acting drugs, caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of predisposition to habituation/dependence.

> *Usage in Pregnancy:* **Use of minor tranquilizers during first trimester should almost always be avoided because their use is rarely a matter of urgency and because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

ORAL Advise patients against simultaneous ingestion of alcohol and other CNS depressants.

Not of value in treatment of psychotic patients; should not be employed in lieu of appropriate treatment. When using oral forms adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may be associated with temporary increase in frequency and/or severity of seizures.

INJECTABLE *To reduce the possibility of venous thrombosis, phlebitis, local irritation, swelling and, rarely, vascular impairment when used I.V.: inject slowly, taking at least one minute for each 5 mg (1 ml) given; do not use small veins, i.e., dorsum of hand or wrist; use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Injectable Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.*

Administer with extreme care to elderly, very ill, those with limited pulmonary reserve because of possibility of apnea and/or cardiac arrest; concomitant use of barbiturates, alcohol or other CNS depressants increases depression with increased risk of apnea; have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosage at least 1/3, administer in small increments. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs.

Has precipitated tonic status epilepticus in patients treated for petit mal status or petit mal variant status. Not recommended for OB use.

Efficacy/safety not established in neonates (age 30 days or less); prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence; can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects — particularly with known compounds which may potentiate action of diazepam, *i.e.*, phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function; avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed and tolerated).

The clearance of diazepam and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.

INJECTABLE Although promptly controlled, seizures may return; readminister if necessary; not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures; use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, observed in patients during and after diazepam therapy are of no known significance.

INJECTABLE Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia.

In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm/pain in throat or chest have been reported.

Dosage: Individualize for maximum beneficial effect.

ORAL *Adults:* Anxiety disorders, relief of symptoms of anxiety—Valium (diazepam/Roche) tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 Valrelease capsules (15 to 30 mg) daily. Acute alcohol withdrawal—tablets, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; or 2 capsules (30 mg) the first 24 hours, then 1 capsule (15 mg) daily as needed. Adjunctively in skeletal muscle spasm—tablets, 2 to 10 mg t.i.d. or q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily. Adjunctively in convulsive disorders—tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily.

Geriatric or debilitated patients: Tablets—2 to 2½ mg 1 or 2 times daily initially, increasing as needed and tolerated (see Precautions). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose.

Children: Tablets—1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use in children under 6 months). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose (not for use in children under 6 months).

INJECTABLE Usual initial dose in older children and adults is 2 to 20 mg I.M. or I.V., depending on indication and severity. Larger doses may be required in some conditions (tetanus). In acute conditions injection may be repeated within 1 hour, although interval of 3 to 4 hours is usually satisfactory. Lower doses (usually 2 to 5 mg) with slow dosage increase for elderly or debilitated patients and when sedative drugs are added. (See Warnings and Adverse Reactions.)

For dosages in infants and children see below; have resuscitative facilities available.

I.M. use: by deep injection into the muscle.

I.V. use: inject slowly, take at least one minute for each 5 mg (1 ml) given. Do not use small veins, i.e., dorsum of hand or wrist. Use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute Valium with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.

Moderate anxiety disorders and symptoms of anxiety, 2 to 5 mg I.M. or I.V., and severe anxiety disorders and symptoms of anxiety, 5 to 10 mg I.M. or I.V., repeat in 3 to 4 hours if necessary; acute alcohol withdrawal, 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary. Muscle spasm, in adults, 5 to 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary (tetanus may require larger doses); in children *administer I.V. slowly*; for tetanus in infants over 30 days of age, 1 to 2 mg I.M. or I.V., repeat every 3 to 4 hours if necessary; in children 5 years or older, 5 to 10 mg repeated every 3 to 4 hours as needed. Respiratory assistance should be available.

Status epilepticus, severe recurrent convulsive seizures (I.V. route preferred), 5 to 10 mg adult dose administered slowly, repeat at 10- to 15-minute intervals up to 30 mg maximum. Repeat in 2 to 4 hours if necessary, keeping in mind possibility of residual active metabolites. Use caution in presence of chronic lung disease or unstable cardiovascular status. Infants (over 30 days) and children (under 5 years), 0.2 to 0.5 mg slowly every 2 to 5 min., up to 5 mg (I.V. preferred). Children 5 years plus, 1 mg every 2 to 5 min., up to 10 mg (slow I.V. preferred); repeat in 2 to 4 hours if needed. EEG monitoring may be helpful.

In endoscopic procedures, titrate I.V. dosage to desired sedative response, generally 10 mg or less but up to 20 mg (if narcotics are omitted) immediately prior to procedure; if I.V. cannot be used, 5 to 10 mg I.M. approximately 30 minutes prior to procedure. As preoperative medication, 10 mg I.M.; in cardioversion, 5 to 15 mg I.V. within 5 to 10 minutes prior to procedure. Once acute symptomatology has been properly controlled with injectable form, patient may be placed on oral form if further treatment is required.

Management of Overdosage: Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure; employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension. Dialysis is of limited value.

How Supplied:

ORAL Valium scored tablets — 2 mg, white; 5 mg, yellow; 10 mg, blue — bottles of 100 and 500; Prescription Paks of 50, available in trays of 10; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25 and in boxes containing 10 strips of 10.

Valrelease (diazepam/Roche) slow-release capsules — 15 mg (yellow and blue), bottles of 100; Prescription Paks of 30.

INJECTABLE Ampuls, 2 ml, boxes of 10; Vials, 10 ml, boxes of 1; Tel-E-Ject® (disposable syringes), 2 ml, boxes of 10. Each ml contains 5 mg diazepam, compounded with 40% propylene glycol, 10% ethyl alcohol, 5% sodium benzoate and benzoic acid as buffers, and 1.5% benzyl alcohol as preservative.

ROCHE®

Application for Scientific Exhibits

1983 Annual Meeting — Kentucky Medical Association

Ramada Inn/Bluegrass Convention Center — Louisville, Kentucky — September 20, 21, 22

1. Title of exhibit _____

2. Name(s) of exhibitor(s) _____

 Address _____

 Professional title _____

3. Institution if other than exhibitor _____

4. Amount of backwall footage required _____
 (The draped booth has 4′ side walls. This footage should not be included in backwall footage required.)
 SHELF DESIRED? _____ (Table 2′ deep X width of backwall footage) Electrical outlet desired _____

5. Will summary printed matter be available or obtainable for the interested physician? _____

6. Indicate sources of assistance provided to you in connection with this exhibit _____

7. Has this exhibit been displayed before? If so, when & where? _____

8. It is required that you attach a rough sketch or photograph and a brief outline of your exhibit to include: (a) content of the presentation, and (b) the method, eg., equipment to be used.

Date _____

Signature of Applicant

Fill Out and Mail to:

RICHARD A. KIELAR, M.D., Chairman
Scientific Exhibits Committee
Kentucky Medical Association
3532 Ephraim McDowell Drive
Louisville, Kentucky 40205

The Kentucky Medical Association welcomes and supports scientific exhibits as a facet of continuing postgraduate education.

Applications for space should be received before June 1, 1983.

- **KMA provides, without cost to the exhibitor, one 2 ft. Table as shelving, bracket lights and a title sign.**
- **Spotlights, view boxes, furniture, decorations, etc., may be furnished by the exhibitor or may be rented, if desired, by applying directly to the George E. Fern Company, 328 Louisville Air Park, Louisville, Kentucky 40213.**
- ***Commercial* exhibit materials and handouts are prohibited in the Scientific Exhibit area.**
- **Transportation and erection costs are the responsibility of the exhibitor.**
- **Exhibit *must be attended* during intermissions to answer physicians' questions. It is also desirable to have someone in attendance throughout the program.**
- **Equipment which will create noise must not be used during the general sessions and, at other times, must be controlled by head or earphones or a muffling device.**
- **Exhibit must be dismantled and removed by 4:00 P.M., Thursday, September 22, 1983.**
- **Exhibit space is *strictly limited* to footage and space allotted. *No* exhibit may extend into the aisle.**
- **The Bluegrass Convention Center and the Kentucky Medical Association or its agents cannot guarantee against loss or damage and will assume no liability for damages nor guarantee the exhibitor against loss of any kind. The exhibitor agrees, with the Association, to be responsible to the Bluegrass Convention Center for damages that may occur as a result of the exhibitor's use of the facility.**

ACCREDITATION

KAFP allows one credit hour for each hour of participation and presentation of scientific exhibits up to 15 hours. AMA allows up to 10 hours for AMA Category 4 credit.



13th Annual Emergency Medical Care Seminar June 14, 15, 16, 1983

Physicians, nurses, medical assistants, EMT's paramedics and others interested in emergency medicine are invited to attend the 2½ day meeting of the Emergency Medical Care Seminar at the Executive West Hotel, Louisville.

George R. Nichols, II, M.D., will again be one of the guest luncheon speakers on Tuesday, June 14. Doctor Nichols is a Forensic Pathologist at the University of Louisville and Chief Medical Examiner for Kentucky. His presentation will cover problems of child abuse investigations in Kentucky. Reported cases occur in all districts of the state. Fatalities have been investigated by the Medical Examiner Program in counties with as large a population as 685,000 to as small as 10,000. Sexual abuse and exploitation will also be discussed.

Lewis M. Flint, M.D., Chief of Surgery at the University Hospital/Louisville University Hospital and Professor of Surgery at the University of Louisville will be Wednesday's luncheon speaker. He will address the issue of transferring trauma patients and will discuss how improved outcome for trauma patients depends on early resuscitation and transfer of patients to trauma treatment centers.

Registration fee for the meeting is $20 per day for KMA members, $40 per day for non-member Kentucky physicians. After Thursday morning's scientific presentation, participants may spend an afternoon at Churchill Downs. The cost will be included in Thursday's registration fee.

You must register in advance to attend the scientific meetings and the afternoon at Churchill Downs. To make reservations at the Executive West Motor Hotel, call (502) 367-2251. Be sure to indicate that you will be attending the Emergency Seminar to receive the convention rate.

- This course has been approved by the Kentucky Board of Nursing for 15 contact hours.
- 15 hours of Continuing Education Credit has been awarded by the National Registry of Emergency Medical Technicians.
- This program has been reviewed and is acceptable for 12½ prescribed hours by the American Academy of Family Physicians.
- This program has been approved by the American College of Emergency Physicians for 14 hours ACEP Category I Credit.



George R. Nichols, II, M.D.



Lewis M. Flint, M.D.

- The Kentucky Medical Association is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians. The program is acceptable for credit under Category I of the AMA Physician's Recognition Award on an hour for hour basis.

To register for the seminar use the form below.

See page 337 for EMCS Program

Registration

Name_____

Address_____

City_____State_____Zip_____

Please register me as follows:

_____June 14
_____June 15
_____June 16

_____KMA member
_____Non-member MD
_____Nurse
_____EMT
_____Paramedic
_____Dentist
_____Other (Specify)

Please complete the following:

Tuesday, June 14 (Choose two)

_____Records Documentation for the Emergency Nurse
_____Records Documentation for the EMT/Paramedic
_____Helicopter Air Transport
_____Hepatitis B—The New Vaccine

Thursday, June 16 (Choose one)

_____An Afternoon at Churchill Downs
_____Luncheon and film

Please return to:
Kentucky Medical Association
3532 Ephraim McDowell Dr.
Louisville, Kentucky 40205
(502) 459-9790

STATEMENT OF OWNERSHIP MANAGEMENT AND CIRCULATION

(Required by 39 U.S.C. 3626)

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9. Nonprofit organizations authorized to mail at special rates: The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes have not changed during the preceding 12 months.
10. Extent and nature of circulation:

	Average no. copies each issue during preceding 12 months	Single issue Published nearest to filing date
A. Total no. copies printed:	4,138	4,175
B. Paid circulation:		
1. Sales through dealers and carriers, street vendors and counter sales:	0	0
2. Mail subscriptions:	3,809	3,754
C. Total paid circulation:	3,809	3,754
D. Free distribution by mail, carrier or other means.		
1. Samples, complimentary, and other free copies:	262	383
E. Total distribution:	4,071	4,137
F. Office use left-over, unaccounted, spoiled after printing:	67	38
G. Total:	4,138	4,175

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The 34th Annual Session of the Kentucky Surgical Society will be held on May 27-28, 1983, at the Lexington Marriott Resort, Griffin Gate, 1800 Newtown Pike, Lexington, Kentucky 40511. The guest speaker will be G. Tom Shires, M.D., Professor and Chairman of the Department of Surgery at the Cornell University Medical College in New York and Surgeon and Chief, New York Hospital. On Friday, the 27th of May, at the morning session, Dr. Shires will speak on "Current Shock Management." On Saturday, the 28th of May, at the morning session, Dr. Shires will speak on "Management of Difficult Abdominal Injuries."

Are you concerned about what your drinking is doing to you? — to your practice? — to your family?

For Help Call

COMMITTEE ON IMPAIRED PHYSICIANS 502/459-9790

13th Annual Emergency Medical Care Seminar
June 14, 15, 16, 1983
Executive West Motor Hotel
Louisville, Kentucky

Tuesday, June 14, 1983

Morning Session

"Pediatric Emergencies"

8:00 a.m. Registration

8:40 a.m. Welcome and Orientation
Opening Remarks
Moderator: Robert C. Hughes, M.D., Louisville

9:00 a.m. *"Fluid and Electrolyte Problems in Pediatric Emergencies"*

9:30 a.m. *"ACLS, Drugs & Dosage"*
John T. Algren, M.D., Louisville

10:00 a.m. Coffee Break

10:20 a.m. *"Evaluation & Management of Fever"*
Garrett Adams, M.D., Louisville

10:50 a.m. *"Surgical Enigmas"* (common traumas and common surgery)
Diller B. Groff, M.D., Louisville

11:20 a.m. *"Accidental Ingestion"*
George C. Rodgers, Jr., M.D., Louisville

12:00 noon Luncheon—"Child Abuse"
Speaker: George R. Nichols, II, M.D., Louisville

Afternoon Session

2:15 p.m. **Concurrent Sessions**

1. *"Records Documentation for the Emergency Nurse"*
 Ree Murakami, R.N., Louisville
2. *"Records Documentation for the EMT/Paramedic"*
 Randall Herron, Somerset
3. *"Helicopter Air Transport"*
 Moderator: Henry N. Meiers, M.D., Bowling Green
 Jewish Hospital Sky Care—David Holland, M.D.
 University Hospital STAT-Flight—Mary Ann Cooper, M.D.
4. *"Hepatitis B—The New Vaccine"*
 Pat Schweitzer, R.N.

3:15 p.m. Break and switch workshops

4:15 p.m. Ambulance Competition

Wednesday, June 15, 1983

Morning Session

"Pre-Hospital Care"

8:00 a.m. Registration

8:45 a.m. Opening Remarks
Moderator: G. Richard Braen, M.D., Lexington

9:00 a.m. *"Time: The Critical Factor"*
James H. Shewmaker, Louisville

9:30 a.m. *"Head Injuries & Glasgow Coma Scale & Importance of Airways"*
James L. Combs, M.D., Covington

10:00 a.m. Coffee Break

10:20 a.m. *"Critical Factors in Management of Spinal Cord Injuries"*
Thomas A. Kelley, Jr., M.D., Louisville

10:50 a.m. *"The Myocardium: ACLS Update"*
David Raper, M.D.

11:20 a.m. *"The Impaired Nurse"*
Carolyn Mural, R.N.
Barbara Bennett, R.N.

12:00 noon Luncheon: *"Organizing for Trauma Care—Impact on Patient Outcome"*
Speaker: Lewis M. Flint, M.D., Louisville

Afternoon Session

2:15 p.m. *"Extrication Techniques Demonstration"*
Louisville Fire Department

3:15 p.m. *"Traction Splints and Immediate Care of the Compound Fracture"*
Richard L. Munk M.D., Lexington

3:45 p.m. *"Legal Aspects of Emergency Care"*
Frank B. Alvey, M.D., Louisville

4:15 p.m. Adjournment

Thursday, June 16, 1983

Morning Session

"Psychiatric Emergencies"

8:00 a.m.	Registration
8:50 a.m.	Opening Remarks Moderator: Boz Tabler
9:00 a.m.	*"Commitment Law Changes"* David P. Moore, M.D., Louisville
9:30 a.m.	*"Pre-Hospital Transport of the Uncooperative Psychiatric Patient"*
10:00 a.m.	Coffee Break
10:20 a.m.	*"The Hostile Patient"* David L. Stewart, M.D., Louisville
10:50 a.m.	*"Mind Altered Patients"* Ray H. Hayes, M.D., Louisville
11:20 a.m.	*"Assessing Reality of Suicide Threats"*
12:00 Noon	Lunch (Film)

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Edward R. Annis, M.D.

Edward R. Annis, M.D., Florida, Past President of the AMA, was one of the 12 guest speakers at "The Turning Point" conference sponsored by KMA and KPRO.

More than 160 physicians, spouses and other health related personnel attended the two day meeting at the Seelbach Hotel in Louisville.

Topics at the conference covered areas from money management and investment to the economic future for physicians. Details and photographs of the meeting will appear in the June issue of the *Journal.*



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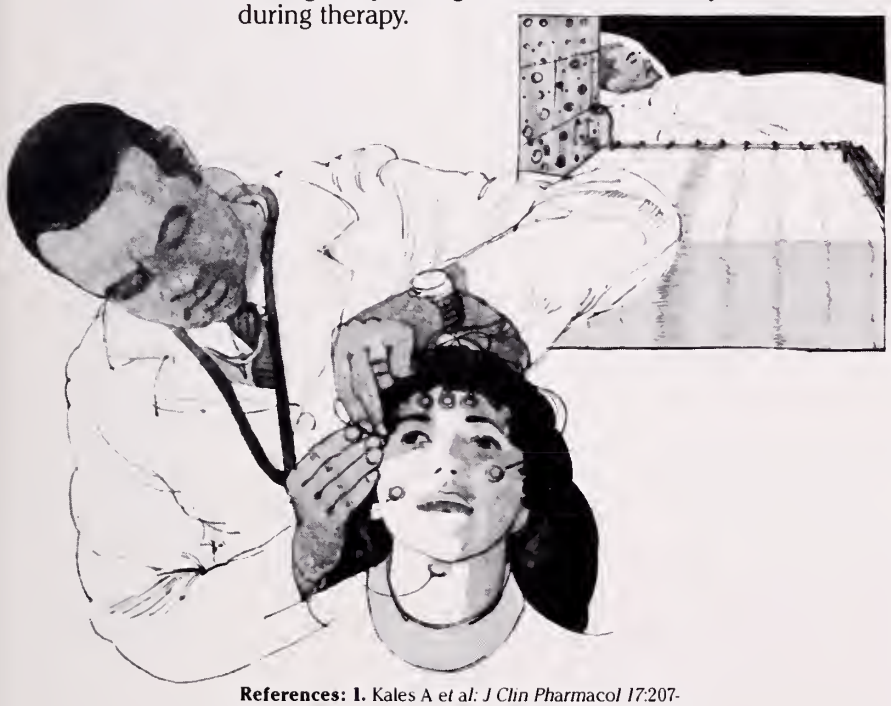
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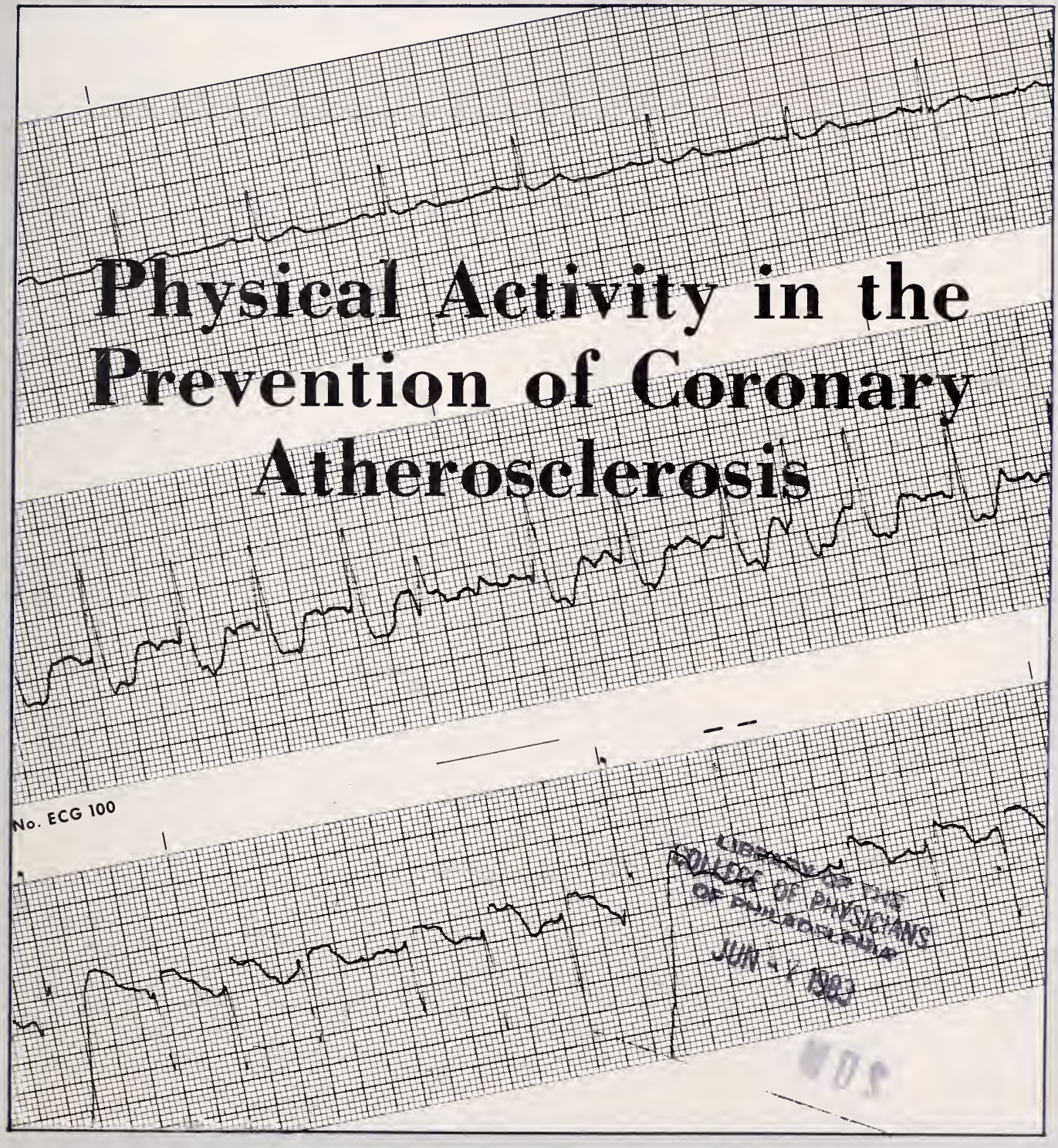
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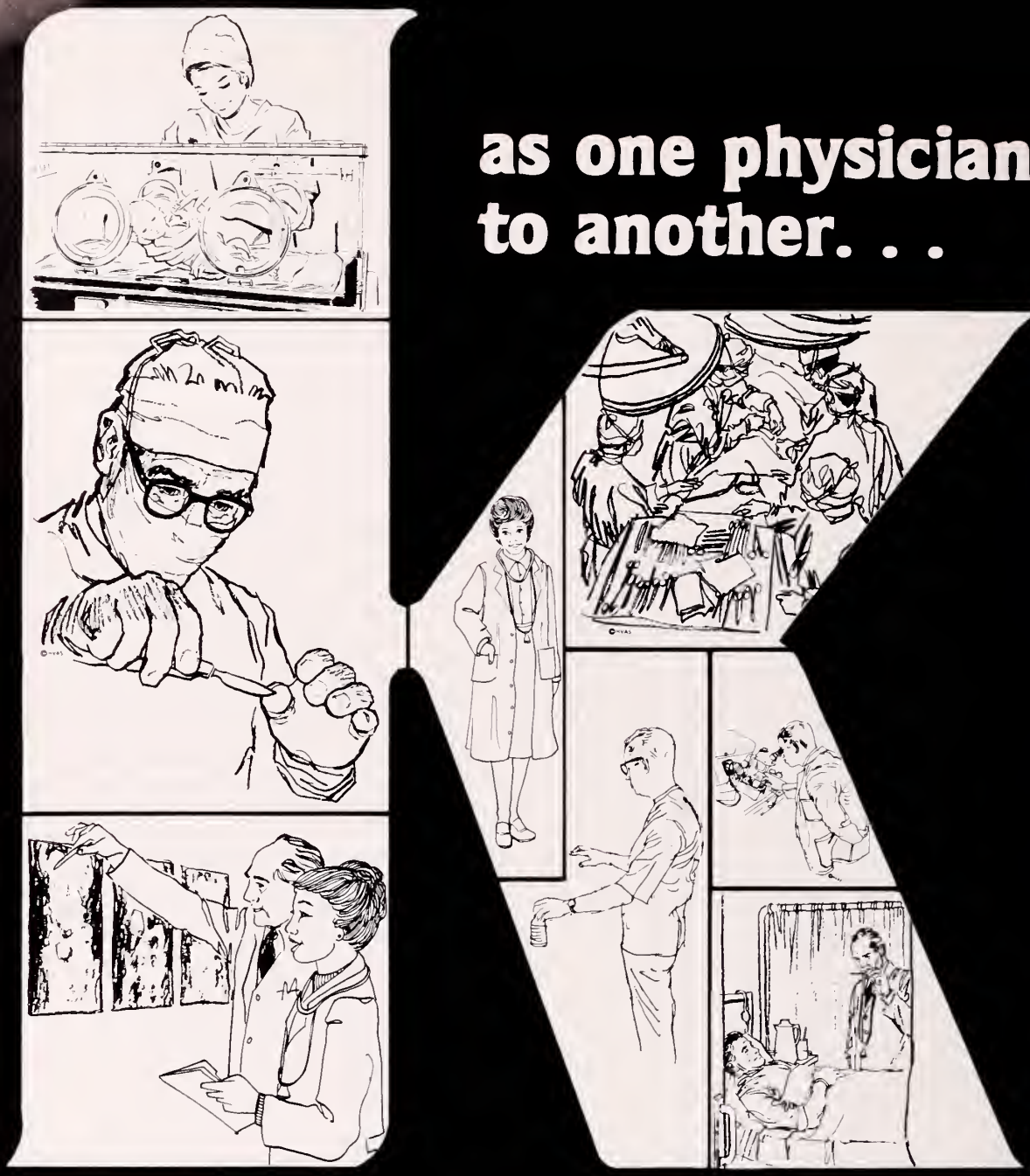
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Physical Activity in the Prevention of Coronary Atherosclerosis

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PRESIDENT'S PAGE



The AMA

THE American Medical Association will meet in Chicago, Illinois for its 1983 Annual Meeting at the Chicago Marriott Hotel. The meeting will convene at 2:00 P.M., Sunday, June 19 and end on June 23. All members are invited to attend. Opening ceremonies will follow with the various reference committees on Monday, June 20. The House of Delegates will be in session June 21, 22 and 23. The Annual Meeting is also the time of the annual elections. This year Kentucky will not have a candidate for office. However, a campaign is being held between Joseph Boyle, M.D. of California and Max Cole, M.D. of Texas for the office of President-Elect. Both men have served as trustees and Joe Boyle has been chairman of the board. The medical profession in the AMA is fortunate that both men are well qualified and either man would make a good president.

The primary issues which will be considered at the meeting are the new federal proposals for reimbursement under the Medicare and Medicaid laws and the new Joint Commission on Accreditation of Hospital Standards for the definition and composition of the professional staffs.

Three hundred and fifty-one total delegates have been certified for the meeting which includes 281 from state associations, 61 from national speciality societies, one student, one housestaff and five service delegates. The section on hospital medical staffs and the section on medical schools will each send one delegate. This is the largest number of delegates ever to attend an AMA convention in modern times.

Representing Kentucky will be Delegates D. Stevens, Lexington, Ky.; F. Rainey, Elizabethtown; H. Haller, Louisville and L. Hess, Florence, Kentucky. Joining them will be Alternate Delegates W. Montgomery, Paducah; K. Crawford, Louisville; D. Barton Corbin and F. Pitzer of Hopkinsville. This represents an increase of one delegate and one alternate over past years, because of the enlarging membership.

The delegation will be ably staffed by the executives from the KMA. Robert Cox has been honored by his fellow medical society executives as President-Elect of the American Medical Society Executives. This offers additional evidence as to the excellent quality of our staff about which our delegation will readily attest. Students and house staff from both U of L and U of K, who will be in attendance, will also participate in the Kentucky delegation.

The medical profession in the United States needs now as never before a strong national organization representing all the elements of medicine. The various national specialty groups and the state organizations cannot do it alone. The AMA has been strengthened in the last few years through able leadership and strong financial reserves. It is the only organization that can represent us to the federal government and to the public at large. If we are to preserve some measure of self-determination in our profession, responsible governance through voluntary organizations such as the AMA is essential. In behalf of the rest of the delegates and alternates, I solicit not just your membership in

PRESIDENT'S PAGE

the AMA but your active participation. Your points of view through written or verbal contact are sought. It is our privilege to serve you as your representative to the AMA, but communication between the delegation and the physicians of Kentucky is necessary for effective representation.

David B. Stevens, M.D.
AMA Delegate

References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Kramer MJ, Maunz YR, Robertson TL, Timmes MD: Morphological studies on the effect of subinhibitory and inhibitory doses of sulfamethoxazole-trimethoprim combination on *Escherichia coli.* Presented at the 12th International Congress of Chemotherapy, Florence, Italy, Jul 19-24, 1981. 3. Spicehandler J *et al: Rev Infect Dis* 4:562-565, Mar-Apr 1982. 4. Stamey TA: *Pathogenesis and Treatment of Urinary Tract Infections.* Baltimore, Williams & Wilkins, 1980, p. 13. 5. Ronald AR: *Clin Ther* 3:176-189, Mar 1980. 6. Cooper J, Brumfitt W, Hamilton-Miller JMT: *J Antimicrob Chemother* 6:231-239, 1980. 7. Gower PE, Tasker PRW: *Br Med J* 1:684-686, Mar 20, 1976. 8. Cosgrove MD, Morrow JW: *J Urol* 111:670-672, May 1974. 9. Iravani A *et al: Antimicrob Agents Chemother* 19:598-604, Apr 1981. 10. Schaeffer AJ, Flynn S, Jones J: *J Urol* 125:825-827, Jun 1981. 11. Rous SN: *J Urol* 125:228-229, Feb 1981. 12. BAC-DATA Medical Information Systems, Inc., Bacteriologic Reports, Winter Series, 1976-82.

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Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, hepatocellular necrosis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.
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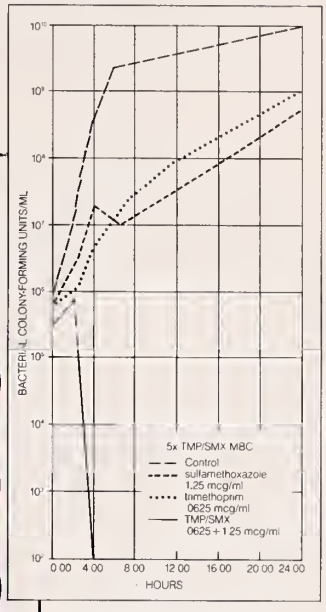
Bactericidal activity with minimal resistance

Percent of isolates of common uropathogens sensitive to BACTRIM and to other antimicrobials

	Escherichia coli	*Klebsiella pneumoniae*	*Proteus mirabilis*	*Proteus vulgaris*	*Proteus sp.*	*Enterobacter sp.*	*Enterobacter aerogenes*	*Enterobacter cloacae*
BACTRIM	96% (328,598)	89% (63,551)	93% (62,691)	84% (4174)	91% (4381)	88% (1736)	96% (7326)	92% (11,856)
ampicillin	72% (345,209)	5% (65,466)	85% (67,338)	16% (4381)	70% (4402)	10% (1775)	9% (7759)	11% (12,091)
cephalexin†	81% (343,339)	85% (67,031)	92% (67,027)	16% (4398)	80% (4365)	22% (1834)	13% (7571)	12% (11,846)
nitrofurantoin	97% (307,785)	65% (61,162)	7% (59,775)	13% (3848)	14% (3059)	67% (1707)	60% (7109)	67% (10,830)

†Analogous to cephalothin, the primary antibiotic disc used in testing.
Source: The Bacteriologic Report, BAC-DATA Medical Information Systems, Inc., Winter Series, 1981-82.
Numbers under percentages refer to the projected number of isolates tested.

RAPID *IN VITRO* DESTRUCTION OF *E. COLI**



Kill curve kinetics of Bactrim and its individual components against *E. coli in vitro.*[1]

The bactericidal action of Bactrim has been demonstrated *in vitro* on laboratory strains of *E. coli*[1,2] and on clinical isolates of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis* and *Morganella morganii*[3]—the most common causative organisms of urinary tract infections.[4] More than 100 published studies attest to the efficacy of Bactrim in recurrent urinary tract infections due to these organisms.[5] In comparative studies with other antimicrobials, Bactrim has consistently demonstrated unsurpassed efficacy during therapy.[6-11]

Resistance to Bactrim develops more slowly than to either of its components alone *in vitro.** Among urinary tract isolates, resistance has rarely emerged in susceptible strains.[5,12] Bactrim is contraindicated in pregnancy at term, during lactation, in infants less than two months old and in documented megaloblastic anemia due to folate deficiency.

Initial episodes of uncomplicated urinary infections should be treated with a single-agent antimicrobial.

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Physical Activity in the Prevention of Coronary Atherosclerosis

JEFFREY A. HILB, M.D.

The association of exercise and the prevention of heart disease is well known. This paper presents a review of the current literature from an epidemiological standpoint, considering both employment-related activity and leisure-time endeavors. Finally, various physiological mechanisms are discussed that provide plausible explanations for the benefits of physical activity on the cardiovascular system.

MUCH as been written in both newspapers and magazines read by the general public as well as in physician-oriented medical journals about the benefits of aerobic exercise and the relationship to cardiovascular disease. This presentation will review the literature in this area from an epidemiologic standpoint and then project some conclusions and guidelines based on several proposed physiologic mechanisms.

Age-adjusted mortality from ischemic heart disease increased 19% in the United States from 1950 to 1963. Since 1963 and to the present the death rate from coronary artery disease has gradually declined. In 1964, the American Heart Association came out with specific recommendations for dietary changes to reduce the intake of cholesterol and saturated fat. In the same year the Surgeon General warned of the health hazards of cigarette smoking. It is certainly tempting to conclude that those recommendations for a change of lifestyle have contributed to the decline of heart disease. One need only glance outdoors to see the multitude of runners, cyclists and tennis players pursuing some recreation and relaxation and wonder if this too may play a role. It is this question I shall now address.

I. Epidemiology—Job-related activity

J. N. Morris and his associates published the first studies in 1953[1] to demonstrate a statistically significant relationship between coronary artery disease and physical activity. Conductors on buses of the London Transport System studied between 1949 and 1950 had 70% of the age-corrected incidence of all coronary disease manifestations as compared to bus drivers in the same area. Presumably the significant factor was that the conductors were more active as they went up and down stairs on the double decker buses collecting tickets while the drivers were relatively sedentary. The same investigators compared London postmen with less active postal clerks. Those workers that had intermediate levels of activity demonstrated total incidence as well as early mortality rates between the most active postmen and the most sedentary grades of postal clerks. It is of interest that in both study populations, although the physically active group had less coronary artery disease and what disease they did have was less severe, the incidence of angina pectoris was higher in the active men than those less active. In a later article[2] Morris noted there were some factors of selection such as height limitation for bus conductor applicants which might have been an influence.

Chapman[3] in 1957 reported on civil service workers in Los Angeles. There were no statistically significant differences between less active and more active workers and total coronary artery disease (CHD) manifestations or myocardial infarction. This study remains a depar-

ture from the general trend. Stamler's data[4] on Chicago utility workers showed a slightly lower incidence of coronary artery disease in those more physically active, but this was not at a high level of statistical significance.

Brown studied a group of elderly patients over 65 in Birmingham, England, with respect to their previously held jobs and found that the more active individuals had a more favorable status for CHD prevalence.[5] In a study of North Dakota residents by Zukel,[6] a sharp difference was noted in the incidence of CHD in persons performing "heavy" work versus those engaged in minimal physical labor. Analysis revealed that those doing from one to two hours of heavy physical activity per day had only 13% the incidence of coronary events of those working less than one hour involving vigorous activity.

Breslow and Buell published a rather elaborate study which examined California mortality records from 1949 to 1951.[7] They correlated stated occupations with cause of death. They concluded that there was a legitimate 40% greater risk of coronary mortality in sedentary workers compared with heavy workers, but that the simple association of previous occupation and physical activity had to be corrected for the strong association of increased general mortality with increased physical activity of work.

Taylor performed a study of the mortality rates among clerks, switchmen, and sectionmen (involved in heavy repair work) employed by the railroad industry.[8] Age-adjusted rates for all deaths were found to be 11.83 per 1000 for clerks, 10.29 for switchmen and 7.62 for sectionmen. Corresponding figures attributed to coronary artery disease were 5.7, 3.9 and 2.8 respectively.

Kahn investigated postal workers in Washington, D.C., in a similar manner as Morris with the postal workers of London some 10 years earlier.[9] His study gave added support to the concept that increased activity of letter carriers offered protection from coronary artery disease not found with postal clerks and also suggested that physical activity of five to 15 years previously would not alter current mortality rates. McDonough investigated a biracial community in Georgia and found a marked difference in CHD incidence between the more active sharecroppers on small farms and the less active proprietary managers of large farms.[10]

Before advancing into the period of the 1970's, let us consider an important autopsy study done by Morris and Crawford in 1958.[11] He noted that in those dying of causes other than CHD that there were more healed infarcts, fibrinous patches, scars, and coronary occlusions in individuals formerly engaged in "light" other than "heavy" job related activity. The overall conclusion was that physical activity may reduce myocardial damage caused by the ischemic process, but had no influence on the degree of arteriosclerosis occurring in the major coronary arteries. Spain and Bradness did a post-mortum examination of all major branches of the coronary circulation of men who had died unexpectedly and suddenly of traumatic causes.[12] The amount of atherosclerosis as determined by the degree of stenosis of the lumen and extent of surface area involvement was no different in those men who had sedentary jobs compared with those who had physically taxing occupations.

Paffenbarger in his now famous study of San Francisco longshoremen tried to further quantify the concept of the protective effects of heavy job-related activity.[13] Cargo handlers expended an average of 6.7 calories per minute while less active longshoremen averaged 2.8 calories per minute over an equivalent work period. The study demonstrated that the men with physically less active jobs sustained mortality rates from CHD one-third higher than their cargo-handling work mates (80 versus 50 per 10,000 person-years experience). Of interest is that no significant difference emerged in mortality rates from stroke in the two categories of work activity level. The emphasis of this study is on physical activity; however, this study also presented data showing that the risk of death from coronary artery disease was much higher in smokers, those with higher systolic blood pressure, and those with body weights above mean level. The presented findings suggested that physical activity has either a protective effect on coronary mortality or a selective effect related to a resistant cardiac system. The fact that the association between work activity and coronary artery disease mortality persisted over a 16-year period supports the notion of an actual preventive influence. Paffenbarger extended and amplified his study over an 18-year period in a subsequent paper[14] and included the additional variables of previously diagnosed heart disease and abnormal glucose metabolism. As before, for both low- and high-risk levels of the other characteristics, cargo handlers tended to experience lower mortality rates than their relatively sedentary mates. The author emphasized that since job activity showed

a seemingly protective effect on coronary but not on stroke mortality, vigorous caloric expenditure seems to exert an inhibiting influence on disease of the myocardium rather than general atherosclerosis.

Cassel did a study[15] in Evans County Georgia in the same locale where McDonough gathered his data seven years earlier.[10] Cassel sought to show that although the incidence of coronary artery disease was lower in black than in white men in every occupational category except sharecropper, the difference was based on a critical threshold of energy expenditure rather than a genetic basis. The study did not prove that racial factors are totally inconsequential, but merely that such factors cannot explain the difference between blacks and whites on one hand and white sharecroppers and farmers on the other. Data are presented that protection against CHD is achieved only if the critical threshold value of physical activity is reached.

Brunner and others in a 1974 study[16] expanded the previous reports of 1960[17] in which they outlined the incidence of heart attacks among members of Israeli collective settlements (Kibbutzim). The incidence of angina, myocardial infarction, and death from CHD over a 15-year period was reviewed. The lifestyle of the Kibbutz provided a good opportunity to examine the net effect of physical activity because of the relatively controlled uniform environment. Members of each settlement were engaged in a diversity of jobs from which they seldom changed from one work category to another. Food was prepared in a single kitchen. The study showed that in males the risk of developing angina as the first manifestation of CHD was 2.6 times greater in the sedentary workers than in the non-sedentary. In the female workers the ratio was 3.5. Of those workers presenting first with myocardial infarction the overall risk was 2.5 higher in the sedentary over non-sedentary males. The incidence of infarction in females was too low to yield sufficient data. The overall relative risk of fatal ischemic heart disease of sedentary to non-sedentary workers was 1.97. A survey of leisure time activities showed that there was not a sufficient amount of off-work physical effort to have altered the findings. Data from the study showed there were no differences in the two work categories in cholesterol, triglycerides, and in the fraction of obese members. It was found in all age brackets and in both sexes that sedentary workers had an incidence rate of ischemic heart disease of 2-3.5 times as high as non-sedentary workers.

Doctor Paffenbarger extended his earlier studies and added new insights when he presented data on 6351 longshoremen followed for 22 years to age 75 or to death.[18] The protective influence of heavy work was more firmly defined than in previous studies, as adjustments for job transfers were considered. Assigning the heavy work category a value of 1.0, the relative risk of fatal coronary disease in the light and moderate categories are 1.8 and 1.7, respectively. The data on sudden death was particularly impressive, lending support to the implications of a protective threshold of energy output. Considering the sudden death rate as 1.0 for heavy work, the relative risk among light and moderate work is 2.8 and 3.5 respectively. Corresponding data for delayed death are 1.0, 1.5, and 1.4. Altogether the proposed sparing effect of high energy expenditure on coronary death rates seemed concentrated in but not limited to sudden death. In 1977 another followup study of the San Francisco longshoremen was released.[19] A birth-cohort analysis was undertaken assessing job activity and six personal characteristics with respect to fatal myocardial infarction. Four cohort age groups, *ie*, 35-44, 45-54, 55-64, and 65-74, established in 1951 were evaluated annually for job transitions affecting energy output and for sudden or delayed death from heart attack by age 75. Overall, it was shown that the relationship of reduced energy output and fatal infarction was most evident in younger and middle age. No conclusion could be made regarding whether there might be a reduction of risk, *ie*, protection, with higher energy expenditure or merely that inactivity generated a greater risk of disease. One can speculate the process is a "two-way street."

II: Epidemiology—Leisure-time Activity

Until the early 1970's most of the work done related to conditioning exercise and heart disease was based on evaluation of job-related activity. It became apparent there were limitations on this sort of data and the medical literature started to shift away from occupational sources and pursue the implications of leisure-time activity. Roger Bannister, both an accomplished physician and the first man to break the four-minute mile, delivered the Chadwick lecture (subsequently published[20]) discussing the inter-relationship of sport, physical recreation, and national health. He stressed that "sport is a natural, worthwhile, and enjoyable form of human expression and eminently deserves support in its own right and for its own sake," but went

on to emphasize the potential health benefits. He indicated several factors have increased our demand for leisure time activity, including a shorter work week, more vacation time, increase in real income, car ownership, industrialization, and urbanization. Overall, he stressed the health benefits of fitness, and his lecture seemed to set the tone for a large body of ongoing medical studies.

Morris studied male executive grade civil service office workers in Britian between 1968-1970.[21] Their activities were recorded on a Friday weekday and a Saturday leisure day, employing a lengthy questionnaire of habits and personal history. Morris confirmed there is a time threshold before heavy physical exercise becomes beneficial and found it to be at least 30 minutes with a total of at least an hour of such activity over the Friday/Saturday time span. The study did not show that vigorous exercise was associated with a lower prevalence of hypertension and hypercholesterolemia. All in all, in men reporting vigorous exercise, the relative risk of developing coronary disease was about one-third of those men not engaged in vigorous activity. Lighter exercise showed no such advantage. Vigorous exercise apparently offered protection against rapidly fatal myocardial infarction as well as first clinical symptoms of CHD throughout middle age.

In an earlier study Hammond was one of the first workers to interrelate the level of exercise and cigarette smoking to mortality data.[22] He studied non-occupational physical activity and found among non-smokers, even light exertion was associated with lower death rates than among the sedentary. Whereas, among those smoking greater than one pack per day the equivalent mortality was associated only with those engaged in "heavy" exercise.

Hickey through the Irish Heart Foundation screened men with regard to both work and leisure activity.[23] The average level of certain coronary risk factor, *ie*, cholesterol, blood pressure, cigarette consumption, and relative weight, decreased with increasing leisure activity, but there was no similar trend for occupation activity. Hickey felt that since occupational activity did not reduce risk factor levels, then physical activity is not in and of itself responsible for reduction of CHD risk. He postulated that men who are physically active during off-the-job hours may lead a healthier life style otherwise.

In 1976 Epstein, Morris, and others extended the study published three years earlier concerning leisure-time exercise in middle aged male British civil servants.[24] The attention in this presentation was focused on resting electrocardiographic changes. (It had been reported in Finland[25] in 1961 that there were fewer EKG changes among lumberjacks than men in other occupations, and in Italy[26] in 1969 Menotti wrote that railroad workers had fewer EKG changes than clerks, but neither study really excluded the possibility of other variables as relevant to CHD.) After allowances were made for subtle differences in blood pressure, cigarette consumption, and cholesterol between vigorously active men and sedentary men, it was demonstrated that men engaging in vigorous leisure-time exercise had significantly fewer EKG abnormalities.

Doctor Kenneth Cooper, known for his popular book on aerobics and long time researcher in the field, performed a cross-sectional study on 3000 men between 1971 and 1974.[27] He determined five age-adjusted cardiorespiratory fitness categories with maximal performance treadmill stress testing and considered factors including blood lipids, pulmonary function, and percent body fat. Overall, there was a consistent inverse relationship among fitness categories with respect to systolic blood pressure, glucose, triglycerides, cholesterol, percent body fat, body weight and resting heart rate. The difference in CHD risk was minimal for adjacent levels of fitness, but became more apparent among categories with greater separation. The researchers emphasize that their data were cross-sectional and that no cause and effect relationship between physical activity and risk factors could be inferred, and that continued longitudinal studies were required.

An interesting study was published in 1978 looking at the risk of heart attack in college alumni.[28] Paffenbarger examined a population of 36,500 male Harvard University alumni who had entered college in 1916 through 1950. Their activities were surveyed during their college years and correlated with physical activity levels as time passed. Notably men who expended less than 2000 calories per week in leisure time exercise had a risk 64% higher than classmates above that threshold. Other cardiac risk factors were considered, including systolic blood pressure, cigarette smoking, body weight, and sports play in college, while the current level of energy expenditure remained an independent determinant. Peak exertion manifested as participation in strenuous sport amplified the effect of total energy output. Student athletic activity as such was unrelated to heart attack risk in later life. Men

who were not athletic as students shared low infarction risks as long as they had a high physical activity index as alumni. Of interest, the data showed no difference in risk of sudden death for active and less active alumni, though a considerably lower risk of delayed death for active men was noted. One could not escape the conclusion that ex-atheletes retained lower cardiac risks only if they maintained a level of physical activity in later years.

In 1980 Sedwick published a controversial study challenging the relationship of physical fitness and risk factors for coronary heart disease.[29] Out of a total of 673 Australian men enrolled in a physical training course, 370 were available four to six years later for evaluation of several coronary risk factors. Sedwick concluded that there were no significant changes in the measured cardiac risk factors over the followup period after subjects completed the physical training course and were given education with regard to proper diet and giving up smoking. Those men who remained active with a higher degree of fitness did not differ in risk factors from those returning to a sedentary life style. Moffitt challenged the study on the basis that criteria for the intensity of exercise was not rigorous enough and pointed out there was a lack of measurement of the actual incidence of heart disease. J. N. Morris looked at his accumulated data of 17,944 middle aged civil workers with regard to vigorous exercise in leisure time.[31] In the previous study[21] of the same patient population there was a rather weak association between estimates of total physical activity on the sample days and the resultant incidence of CHD. There was in the revised study, however, a much stronger inverse association between the incidence of disease and vigorous activity during off-duty hours. Those men engaged in vigorous exercise and surveyed over a span of eight and one half years had an incidence of CHD about 45% of those reporting no vigorous activity. The rates of the active men were lower in both fatal and non-fatal clinical presentations, but it was much more impressive in the lower incidence of fatal events. Of importance, the reduced risk in active men was demonstrated in those with a family history of heart disease, in those who were heavy smokers, and those noted to be hypertensive.

In a series of verbal exchanges between R. J. Jarrett and Doctor Morris the debate persisted as to the matter of self-selection.[32-34] Jarrett, though himself a participant in vigorous sports, maintained in essence that the difference in rates of CHD between those involved with vigorous exercise and those more sedentary could be artifactual. That is, there could be self-selection of men into the less active category of those who would discontinue exercise because of angina that would otherwise be overlooked. Jarrett could accept the association of physical activity and subsequent risk of CHD, but could not accept a cause and effect hypothesis.

III. Mechanisms

Having considered in some detail the epidemiologic aspects of physical activity and coronary artery disease, one should explore briefly some possible mechanisms on which this beneficial relationship might be based.

The most obvious consideration is the function of the myocardium and the coronary blood vessels. In 1957 Eckstein[35] experimentally narrowed the coronary arteries of sedentary and exercised dogs. Although the partial occlusion failed to stimulate growth of collateral blood vessels by itself, those animals who were conditioned with exercise had considerable coronary collateral vascularization. There is a suggestion that vigorous physical activity could actually result in larger coronary arteries. Post-mortum examination of the famous marathon runner, Clarence DeMar, demonstrated greatly enlarged coronary blood vessels.[36]

With regard to an increase in myocardial efficiency, some indirect parameters that are altered with cardiovascular training could be potentially important: (1) bradycardia, during both rest and submaximal exercise, (2) increase in cardiac output, (3) a longer diastolic period available for coronary perfusion, (4) augmentation of both resting and exercise stroke volume, (5) a reduced heart chamber size at a given work load, (6) myocardial tissue hypertrophy, (7) redistribution of blood flow to more active muscles, and (8) a lowered systemic blood pressure. Any combination of the above mentioned changes would tend to lower oxygen requirements of the heart during rest and exercise, and thus a reduced coronary blood flow could still be adequate. Physical activity may also improve myocardial efficiency by increasing available potassium, cytochrome oxidase stores, and the capacity to metabolize lactate.[37]

There has been speculation for a number of years that physical activity might increase fibrinolytic capability and serve to inhibit intravascular thrombus formation. Thrombus production, of course, could well

enter into the pathophysiology of several vascular disorders, including pulmonary embolism, stroke, and heart attack. Williams[38] studied conditioned subjects, measuring both treadmill performance and fibrinolytic activity. In conditioned subjects there was a significant increase in plasma fibrinolytic activity with stimulation by venous occlusion. The level of stimulated fibrinolysis in the pre-conditioning stage after venous occlusion was not changed. There were no observed changes in potentially confounding variables including cigarette smoking and blood lipids. Overall, since Williams demonstrated a fall in the fibrinolytic activity at rest and an increase after venous occlusion in conditioned subjects, there is reflected and enhanced vascular endothelial release of plasminogen activators induced by thrombotic stimulation.

One cannot ignore the notion that physical activity can act by influencing intermediate variables which are themselves controllable risk factors for heart disease. It is beyond the scope of this presentation to outline the evidence; however, numerous studies have shown that physical exertion can be a direct influence on glucose intolerance, arterial hypertension, control of obesity, and serum lipid levels.

Hartung specifically investigated the relationship of diet to high density lipo-protein cholesterol in runners, joggers and inactive men.[39] Starting from the evidence that HDL cholesterol is associated with a reduced risk of CHD[40] and that women, male athletes, and nonsmokers have increased levels of HDL[41], they evaluated the impact of diet on lipo-protein levels in runners and inactive men. Among the runners, joggers and inactive men there were differences with regard to weight, adiposity and blood pressure, but diets were not significantly different. The measured values of HDL cholesterol in the inactive subjects, joggers and marathon runners were 43, 58, and 65, respectively. Even the more casual joggers, averaging 11 miles per week, had significantly higher HDL cholesterol levels than inactive men. Hartung speculated that physical activity increased the level of adipose tissue lipo-protein lipase (correlating with HDL concentrations), perhaps by increasing the sensitivity to insulin.

To further explore the mechanism of exercise in impeding the development of cardiovascular disease, Kramsch[42] studied the effect of conditioning by utilizing a treadmill on monkeys fed an atherogenic diet. One group of monkeys was fed a controlled diet while the other two were fed an isocaloric, atherogenic diet. The diet control group and one group fed the fatty diet were limited to activity in a single cage. The third group was exercised under controlled conditions, first using the controlled diet for 18 months while being gradually conditioned with treadmill exercise and then given the atherogenic diet for an additional 24 months. In subjects when exercise was initiated before the induction of atherosclerosis with diet, post-mortum examination of coronary arteries revealed reduction of surface involvement, reduction of intimal thickening, alteration of lesion composition, with suppressed collagen accumulation, and widening of the lumina of the coronary arteries. The exercise monkeys also had fewer ischemic EKG changes, less angiographic evidence of coronary artery narrowing and less sudden death. Bruce[43] pointed out there should have been a fourth study group of monkeys fed the controlled diet and questioned the length of time the animals were fed the atherogenic diet.

The major proposed mechanisms to explain how physical conditioning may influence the development of coronary artery disease have been discussed. Other factors such as thyroid function, growth hormone production, efficiency of peripheral blood distribution and venous return, and alteration in red cell mass and blood volume may also play a role. Less tangible influences such as reduction of psychologic stresses and reinforcement of a more prudent lifestyle cannot be ignored.

Conclusion

It is clear from numerous epidemiologic studies that there is a definite correlation between physical activity and the occurrence of coronary heart disease. Data demonstrate that this applies to both occupational and nonoccupational activity. It appears that for exercise to be of benefit, it must be continued throughout a lifetime, as physical activity or athletic ability cannot be cumulatively stored to yield a favorable influence later on if not maintained. The mechanisms by which physical activity has a positive effect on CHD have been described, and it appears that there is an interaction of several different possibilities. It would seem that physical activity acts as an independent determinant of cardiovascular health, but may in turn influence other variables that themselves have an effect. Throughout the chronology of the numerous studies, the fundamental controversy persists as to whether physical activity is an intrinsic cause of improved car-

diac health or if, in fact, people who engage in vigorous activity are self-selected from pre-existing characteristics. This issue is not yet entirely resolved.

With the exponential growth of people taking part in running and other leisure-time fitness activities, much more data is on the horizon. It would not be fair to avoid mentioning that runners are by no means immune from fatal atherosclerosis.[44] Those of us who continue to enjoy running as a part of our lifestyle can only hope that the accumulated medical evidence will bear out that such activity will have a beneficial effect toward the attainment of good health.

References 1. Morris J, Heady J, Raffle P, Roberts C and Parks J: Coronary heart disease and physical activity of work. *Lancet* 2:1053-1057, 1953. 2. Morris J, Heady J and Raffle P: Physique of London busmen: epidemiology of uniforms. *Lancet* 2:569-574, 1956. 3. Chapman J, Goerke L, Dixon W, Loveland D and Phillips E: The clinical status of a population in Los Angeles under observation for two to three years. *Am J. Public Health* 47:33-39, 1957. 4. Stamler J *et al:* Prevalence and incidence of coronary artery disease in strata of the labor force of a Chicago industrial corporation. *J Chronic Dis.* 11:405-410, 1960. 5. Brown R, Davison L, McKeown T and Whitfield A: Coronary artery disease—influence affecting its incidence in males in the seventh decade. *Lancet* 2:1073-1078, 1957. 6. Zukel W *et al:* A short-term community study of the epidemiology of coronary heart disease. *Am J Public Health* 49:1630-1638, 1959. 7. Breslow L and Buell P: Mortality from coronary heart disease and physical activity of work in California. *J Chronic Dis* 11:421-440, 1960. 8.Taylor H *et al:* Death rates among physically active and sedentary employees of the railroad industry. *Am J. Public Health* 52:1697-1706, 1962. 9. Kahn H: The relationship of reported coronary heart disease mortality to physical activity of work. *Am J Public Health* 53:1058-1067, 1963. 10. McDonough J, Hames C, Stulb S and Garrison G: Coronary heart disease among Negroes and whites in Evans County, Georgia. *J Chronic Dis* 18:443-447, 1965. 11. Morris J and Crawford M: Coronary heart disease and physical activity of work. *Brit Med J* 2:1485-1495, 1958. 12. Spain J and Bradess V: Occupational physical activity and the degree of coronary atherosclerosis in "normal" men. *Circulation* 22:239-243, 1960. 13. Paffenbarger R, Laughlin M, Gima A and Black R: Work activity of Longshoremen as related to death from coronary heart disease and stroke. *N Engl J Med* 282:1109-1114, 1970. 14. Paffenbarger R, Gima A, Laughlin M and Black R: Characteristics of Longshoremen related to fatal coronary heart disease and stroke. *Am J Public Health* 61:1362-1370, 1971. 15. Cassel J *et al:* Occupation and physical activity and coronary heart disease. *Arch Intern Med* 128:920-928, 1971. 16. Brunner D, Manelis G, Modan M, and Levin S: Physical activity at work and the incidence of myocardial infarction, angina pectoris and death due to ischemic heart disease. *J Chronic Dis* 27:217-233, 1974. 17. Brunner D and Manelis G: Myocardial infarction among members of communal settlements in Israel. *Lancet* 2:1049-1055, 1960. 18. Paffenbarger R and Hale W. Work activity and coronary heart mortality. *N Engl J Med* 292:545-550, 1975. 19. Paffenbarger R, Hale W, Brand R and Hyde R: Work-energy level, personal characteristics, and fatal heart attack: a birth-cohort effect. *Am J Epidemiol* 105:200-213, 1977. 20. Bannister R: Sport, physical recreation, and the national health. *Br Med J* 4:711-715, 1972. 21. Morris J. *et al.* Vigorous exercise in leisure-time and the incidence of coronary heart disease. *Lancet* 1:333-339, 1973. 22. Hammond E: Smoking in relation to mortality and morbidity. *J Nat Cancer Inst* 32:1161-1164, 1964. 23. Hickey N *et al:* Study of coronary risk factors related to physical activity in 15,171 men. *Br Med J* 3:507-509, 1975. 24. Epstein L, Miller G, Stitt F and Morris J: Vigorous exercise in leisure time, coronary risk-factors, and resting electrocardiogram in middle-aged male civil servants. *Br Heart J* 38:403-409, 1976. 25. Karvonan M *et al:* Heart disease and employment. Cardiovascular studies on lumberjacks. *J Occup Med* 3:49-52, 1961. 26. Menotti A *et al* Habitual physical activity and myocardial infarction. *Cardiologia* 54:119-123, 1969. 27. Cooper K *et al:* Physical fitness levels vs. selected coronary risk factors. *JAMA* 236:166-169, 1976. 28. Paffenbarger R, Wing A and Hyde R: Physical activity as an index of heart attack risk in college alumni. *Am J Epidemiol* 108:161-175, 1978. 29. Sedgwick A *et al:* Long-term effects of physical training programme on risk factors for coronary heart disease in otherwise sedentary men. *Br Med J* 2:7-10, 1980. 30. Moffitt P: Physical training and coronary risk factors (letter). *Br Med J* 2:453, 1980. 31. Morris J, Pollard R, Everitt M and Chave S: Vigorous exercise in leisure-time: protection against coronary heart disease. *Lancet* 2:1207-1210, 1980. 32. Jarrett R: Exercise and the heart (letter). *Lancet* 1:267, 1981. 33. Morris J *et al:* Exercise and the heart (letter). *Lancet* 1:267, 1981. 34. Jarrett R: Exercise and the heart: round two (letter). *Lancet* 1:446-447, 1981. 35. Eckstein R: Effect of exercise and coronary artery narrowing on coronary collateral circulation. *Circ Res* 5:230-235, 1957. 36. Currens J and White P: Half a century of running. *N Engl J Med* 265:988-990, 1961. 37. Raab W: The nonvascular metabolic myocardial vulnerability factor in coronary heart disease. *Am Heart J* 66:685-690, 1963. 38. Williams S *et al:* Physical conditioninig augments the fibrinolytic response to venous occlusion in healthy adults. *N Engl J Med* 302:987-991, 1980. 39. Hartung G. Relation of diet to high-density-lipoprotein cholesterol in middle-aged marathon runners, joggers, and inactive men. *N Engl J Med* 302:357-361, 1980. 40. Gordon T *et al.* High density lipoprotein as a protective factor against coronary heart disease. *Am J Med* 62:707-711, 1977. 41. Hulley S, Cohen R and Widdowson G: Plasma high-density lipoprotein cholesterol level: influence of risk factor intervention. *JAMA* 238:2269-2272, 1977. 42. Kramsch D *et al:* Reduction of coronary atherosclerosis by moderate conditioning exercise in monkeys on an atherogenic diet. *N Engl J Med* 305:1483-1489, 1981. 43. Bruce R: Primary intervention against coronary atherosclerosis by exercise conditioning? (editorial). *N Engl J Med* 305:1525-1526, 1981. 44. Virmani R: Jogging, marathon running, and death. *Prim Cardiol*, Apr., 96-107, 1982.

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Superior Vena Cava Syndrome

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Superior vena cava syndrome is a relatively common complication of intra-thoracic malignancies. It is seen in 3-8% of patients with either bronchogenic carcinoma and/or malignant lymphoma. It can be a medical emergency. Diagnosis is usually made clinically, with symptoms of dyspnea and upper body edema. Treatment is with radiation therapy and/or chemotherapy. Responses are generally dramatic.

THE finding of a thoracic mass is a problem encountered in medical practice. Often, this will be a bronchogenic carcinoma or malignant lymphoma. An occasional complication of a thoracic mass is the development of superior vena cava syndrome. The physician must be able to recognize the signs and symptoms of the superior vena cava (SVC) syndrome and initiate appropriate therapy to reduce early patient morbidity and mortality.

Case Report

A 68-year-old female presented with complaints of a productive white cough and fatigue. She denied fever, chills, sweats, PND, orthopnea or hemoptysis. She smoked one to one and a half packs of cigarettes a day for years. Her past medical history was significant only for surgical removal of a fibroid tumor and an oophorectomy at age 33. She had no known exposure to asbestos, but had worked in a tobacco factory.

Initial examination revealed a healthy appearing female. Examination of the head, eyes, and throat was unremarkable. Chest examination revealed decreased breath sounds over the right chest with decreased tactile femitus. The rest of the examination, including neurological, was normal.

The complete blood count, serum chemistry screen, and urinalysis were all unremarkable. Chest X-ray on admission showed a large right sided pleural effusion. After thoracentesis and removal of approximately one liter of pleural fluid, a right apical mass was seen. This was confirmed with tomography. Bronchoscopy with washings and biopsy of the lung mass, needle biopsy of the pleura, and pleural fluid cell blocks for cytology were done. Pathological reports on the pleural fluid revealed small cell carcinoma. (Figures 1 & 2)

While in the hospital, the patient began to complain of increasing dyspnea, blurring of her vision, bilateral breast swelling, and a fullness in her neck. Examination showed swelling of the chest, breasts, neck and face.

Radiation therapy was begun and cyclophosphamide, doxorubicin, vincristine, and prednisone were administered. Her superior vena cava syndrome symptoms resolved quickly, but she continued to have pleural fluid accumulation. A chest tube was inserted and eventually, tetracycline was given to sclerose the pleura.

At the time of discharge, the patient was in satisfactory condition. She received another course of chemotherapy as an out-patient and has not had any recurrence of her previous symptoms after three months.

Discussion

The superior vena cava syndrome was first described by William Hunter in 1757 in a patient with syphilitic saccular aortic aneurysm.[1] A study by Schechter in 1954 reported 274 cases of superior vena cava syndrome and found that 40% were due to syphilitic aneurysms or tuberculous mediastinitis. Since that time, these two entities have almost disappeared.[2]

SVC syndrome is produced by extrinsic compression of the superior vena cava and associated tributaries and/or by intra-caval thrombosis. The superior vena cava is a thin structure with a low intravascular pressure. It is located in a compartment of the right anterior superior mediastinum that is relatively rigid and is bounded by solid structures: trachea, vertebral bodies and lymph nodes. The superior vena cava is in the



Fig. 1: Chest X-ray of the patient on admission. A large pleural effusion on the right side is present.



Fig. 2: Chest X-ray of the patient after thoracentesis. A right apical mass is present.

immediate area of the right mainstem bronchus. The lymph nodes completely encircle the superior vena cava and drain the entire right thorax and the lower portion of the left.[3,4,5]

Obstruction of the superior vena cava results in symptoms and signs that are classic and usually unmistakable. If the obstruction is incomplete or insidious in onset, the clinical picture is less obvious. These features are typically the same, regardless of the cause. (Table 1)

Venous pressure can range from 200 to 500 mm of water in the presence of obstruction. Usually this increase in pressure results in failure of the superficial veins of the arm to collapse when going from a supine to an elevated position as they do in a normal individual. Facial edema is usually apparent in the morning, but may lessen as the patient remains upright. Males may notice an increase in collar size. Others, may note flushing of the face when bending over. There may be edema of the conjunctiva with proptosis. If the obstruction develops rapidly, patients may show evidence of impaired cerebration attributable to venous engorgement, and intra-cranial edema, the "wet brain syndrome." Features include headaches, visual disturbances, disturbed states of consciousness and convulsions. In slower growing obstructions, there is venous adaption and formation of collateral circulation, reducing the risk of CNS involvement. A slowly developing obstruction, as seen with a benign lesion, is tolerated much better than a rapidly developing obstruction, as with a malignant lesion.[2,5,6]

Presenting symptoms of shortness of breath, facial and upper body swelling are noted most frequently. The most common physical findings are distension of the thoracic and neck veins, edema of the face and tachypnea. (Tables 2 & 3) Although clinical features of SVC obstruction are prominant, misdiagnosis occurs frequently. Erroneous diagnoses include allergic blepharitis, angioneurotic edema or congestive heart failure.[6]

About 20% of the patients had symptoms for less than two weeks prior to admission to the hospital. About 35% had symptoms between three to four weeks. Another 18% had symptoms for five to eight weeks. Age distribution seven to eighty years of age, with the majority in their 50's and 60's. The male to female ratio was 3.6:1.

Diagnosis is usually first made clinically after pres-

entation of the previously mentioned signs and symptoms. Chest X-ray findings are often present. (Table 4) Laboratory methods for diagnosis used were: cytology of sputum and/or pleural effusion, bronchoscopy with biopsy and bronchial washings, mediastinoscopy and biopsy, thoractomy and biopsy, needle biopsy, and lymph node biopsy. Venous angiography is occasionally used, but normally is not necessary. Many of the authorities feel definite tissue diagnosis is not needed before radiation treatment is started. However, such a decision would depend on the clinical state and the urgency to relieve symptoms. Any surgical procedure done to establish a diagnosis, must be done with care. There is a great danger of hemorrhage in the presence of high venous pressure.[1,8,9]

The majority of SVC syndrome cases were caused by a bronchial carcinoma, usually in the right upper lobe. (Table 5) The incidence of SVC syndrome was reported in 3-8% of patients with bronchogenic carcinoma and malignant lymphoma.[1,4,9-14]

Agreement on treatment is not universal, but most authorities agree that radiation therapy is the treatment of choice initially in most cases. Rapid relief of signs and symptoms of SVC syndrome can be achieved with radiation in over 90% of patients treated with adequate doses. Chemotherapy has been used mostly with radiotherapy, but with most tumors, this combination has not been better than radiation alone.[1] Nitrogen mustard was once used in the 1950's and 1960's with radiotherapy to prevent radiation edema. However, no actual evidence of radiation edema exists and there is little evidence that nitrogen mustard helps.[17,18] Recently, Greco and Oldham have reported excellent results (96% relief of symptoms) in patients with small cell cancer and SVC syndrome. They used vincristine sulfate, cyclophosphamide and methotrexate sodium.[16] Other combinations have been with similar success. Others have reported successful treatment of small cell cancer with combination of chemotherapy and radiation.[1,17]

Various combinations of radiation have been used. Levitt used 4000-5000 rads over four to five weeks. Davenport gave 3000-5000 rads over a three week period, giving 1200 rads during the first three days. The higher doses of radiation were found to be only slightly more effective. Response is typically seen within three to five days.[1,2,6,19]

The presence of thrombosis is found in a significant number of patients. Thrombosis seems to hinder relief of symptoms with radiation. Salsali and Cliffton have used fibrinolytic agents to dissolve clots. However, autopsy results have not demonstrated long term success.[1,8]

Therapy is individualized, depending on the severity of symptoms, the anatomic site, and the histiologic type of underlying tumor. Some groups have used diuretics and/or steroids in addition. Supportive therapy includes securing airway patency, and oxygen administration.

Surgery, including reconstruction and bypass, has not been very successful. Surgery has a higher morbidity and mortality rate than radiation and has practically been discontinued at the present time.

Survival of patients with carcinoma and SVC syndrome was found to be about 25% at one year and 1-10% at 30 months following initial therapy. The average survival time was seven months. Survival rates for patients with benign lesions was greater than 80% after five years.[1,9]

In summary, superior vena cava syndrome can be

TABLE 1
FEATURES OF SUPERIOR VENA CAVA SYNDROME

Increased venous pressure
Edema of the head, neck, and upper extremities
Cyanosis due to venous engorgement
Dilated superficial veins on the chest wall

TABLE 2
PRESENTING SYMPTOMS

Shortness of breath	50-58.8%
Facial swelling	43%
Swelling of the trunk or upper extremities	40%
Hemoptysis	38.3%
Chest pain	20%
Cough	20-79.1%
Dysphagia	20-25.2%

TABLE 3
PRESENTING PHYSICAL FINDINGS

Distension of the thoracic veins	67-83.7%
Distention of the veins in the neck	59%
Edema of the face	48-56%
Tachypnea	40%
Plethora of the face	16%
Cyanosis	13%
Edema of the upper extremities	9.3%
Paralyzed true vocal cord	3.5%
Horner's syndrome	2.3%

TABLE 4
CHEST X-RAY FINDINGS

Right superior mediastinal mass	58%
Pleural effusion	26.6%
Hilar adenopathy	24%
Atelectasis	26%

TABLE 5
CAUSES OF SUPERIOR VENA CAVA SYNDROME

Bronchogenic carcinoma	55-79%
Small cell undifferentiated	8-37%
Epidermoid carcinoma	13-20%
Large cell undifferentiated	6-12%
Adenocarcinoma	2- 9%
Malignant lymphoma	17%
Lymphocytic	6%
Histiocytic	5%
Mixed	4%
Unclassified	2%
Other	3- 6%
Kaposi's sarcoma	
Adenocarcinoma	
Metastatic seminoma	
Multinodular goiter	
Fibrosing mediastinitis (tuberculosis or histoplasmosis)	
Aortic aneurysm	
Syphilitic aortitis	
Atrial tumor (myxoma)	
Metastatic squamous cell carcinoma (cervix)	
Swan-Ganz catheter	
Sarcoidosis	

a medical emergency. It predominately occurs in patients with bronchogenic carcinoma and treatment is with radiation therapy and/or chemotherapy. Survival is rare over two years.

References 1. Perez A, Presant A, Van Amburg AL: Management of superior vena caval syndrome. *Semin Oncol* 5:123-34, 1978. 2. Davenport D, Ferree C, Blake D, *et al:* Response to superior vena cava syndrome to radiation therapy. *Cancer* 38:1577-80, 1976. 3. Roswit B, Kaplan G, Jacobson HG: The superior vena cava obstruction syndrome in bronchogenic carcinoma. *Radiology* 61:722-37, 1953. 4. Forman J, Unger K: Unilateral superior vena caval syndrome. *Thorax* 35:314-5, 1980. 5. Davenport D, Ferree C, Blake D, Milton R: Radiation therapy in the treatment of superior vena cava obstruction. *Cancer* 42:2600-3, 1978. 6. Effler DB, Groves LK: Superior vena caval obstruction. *J Thorac Cardiovasc Surg* 43:574-84, 1962. 7. Geller W: The mandate for chemotherapeutic decompression in superior vena caval obstruction. *Radiology* 81:385-7, 1963. 8. Salisali M, Clifton E: Superior vena cava obstruction in carcinoma of the lung. *NY State J Med* 69:2875-80, 1969. 9. Urschel H, Paulson D: Superior vena caval obstruction. *Dis Chest* 49:155-64, 1968. 10. Harbecke R, Schlueter D, Rosenzweig D: Reversible superior vena caval syndrome due to tuberculosis. *Thorax* 34:410-1, 1979. 11. Charles E, Savage E: Superior vena cava syndrome: a late sequela of metastic squamous cell carcinoma of the cervix. *Gynecol Oncol* 10:224-9, 1980. 12. Snow P: Swan-Ganz catheter and superior vena cava syndrome. *JAMA* 243:1525, 1980. 13. Gupta D, Mathur A: Cervical and mediastinal fibrosis presenting with superior vena caval syndrome. *Indian Heart J* 31:302-4, 1979. 14. Radke J, Kaplan H, Conway W: Significance of superior cena cava syndrome developing in a patient with sarcoidosis. *Radiology* 134:311-2, 1980. 15. Greco F, Oldham R: Current concepts in cancer, small-cell lung cancer. *N Eng J Med* 301:355-8, 1979. 16. Greco F, Oldham R: Reply to letter. *N Eng J Med* 302:61, 1980. 17. Mittal, B: Treatment of SVC syndrome (letter). *N Eng J Med* 302:61, 1980. 18. Rubin P, Green J, Holywasser F, Gerle R: Superior vena cava syndrome. *Radiology* 81:388-401, 1963. 19. Levitt S, Jones T, Kilpatric S, *et al:* Treatment of malignant superior vena cava obstruction. *Cancer* 24:447-51, 1969. 20. Scannell J: Etiology and surgical approaches in superior vena caval obstruction. *Radiology* 81:378-9, 1963.

From the Lexington-Fayette County Health Department, Lexington, Kentucky

Unilateral Pulmonary Edema

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Unilateral pulmonary edema is an uncommon condition which is not widely recognized. We wish to report a case of unilateral pulmonary edema secondary to plasma volume overload in which patient position played a significant role, and to discuss the various conditions which may result in unilateral pulmonary edema. The pathophysiologic basis for the development of unilateral pulmonary edema is emphasized.

Case Report

THE patient is a 23-year-old male with an end-stage renal failure secondary to juvenile onset diabetes mellitus. After having missed a dialysis treatment he complained of peripheral edema, shortness of breath, paroxysmal nocturnal dyspnea and orthopnea. His pulmonary symptoms were relieved by lying in a right lateral decubitus position.

The initial chest radiograph (Fig. 1) demonstrated enlargement of the cardiac silhouette, a left pleural effusion, and a diffuse alveolar pattern involving the right lung consistent with unilateral pulmonary edema. Clinically the patient was fluid overloaded. Following dialysis his symptoms resolved. A repeat chest radiograph obtained after dialysis (Fig. 2) showed complete resolution of the alveolar pattern in the right lung confirming the diagnosis.

Discussion

Pulmonary edema may occur following a significant alteration in the capillary hydrostatic pressure, endothelial permeability, or plasma oncotic pressure. Pulmonary edema begins as interstitial edema producing one or more radiographic features which include Kerley's A and B lines, thickening of the interlobar fissures, perivascular and peribronchial cuffing, and hilar haze.[1] When alveolar edema occurs it usually produces a bilateral alveolar pattern with a "butterfly" or "bat-wing" distribution leaving the periphery of the lung relatively clear.[1] Unilateral pulmonary edema is relatively uncommon. The factors contributing to a unilateral distribution are varied and are largely dependent on the underlying cause of the pulmonary edema.

An increase in pulmonary capillary hydrostatic pressure is one of the most common physiologic mechanisms resulting in pulmonary edema. Congestive heart failure, mitral stenosis, and plasma volume overload are common causes of an increased capillary hydrostatic pressure. In these circumstances development of unilateral pulmonary edema is most often positional in nature,[1,2] the edema developing on the dependent or "down" side. Our patient is a perfect example of this phenomenon. A second possible explanation for unilateral pulmonary edema on the right is partial obstruction of arterial blood flow to the left lung by a massively enlarged heart.[1]

Several other conditions causing increased capillary hydrostatic pressure may produce unilateral pulmonary edema. These include unilateral pulmonary vein obstruction associated with mediastinal fibrosis, tumor invasion of the mediastinum, or anomalous pulmonary venous return.[3] By the similar mechanism of increased capillary hydrostatic pressure surgically created left-to-right shunts for the treatment of certain congenital heart diseases may also produce unilateral pulmonary edema.[1,2,4] Both the Waterston procedure and the Blalock-Taussig anastomosis may result in right-sided edema, while the Pott's procedure may result in left-sided edema.[3,4] In all of these cases the unilateral edema may be of a chronic nature.

Unilateral pulmonary edema can also occur following an insult to the capillary endothelium which increases permeability. Unilateral aspiration of gastric contents, water, ethyl alcohol, or kerosene may cause



Fig. 1: The initial chest radiograph demonstrates cardiomegaly, a left pleural effusion, and a diffuse alveolar pattern in the right lung.



Fig. 2: A post dialysis chest radiograph shows resolution of the left pleural effusion and right sided alveolar pattern. The cardiac silhouette remains enlarged.

a chemical pneumonitis and desquamation of the alveolar lining cells. Endothelial permeability increases and pulmonary edema may ensue.[3]

Unilateral pulmonary edema may be produced by the infusion of hypotonic solutions through a venous catheter placed in the right or left pulmonary artery. This will lower the intravascular oncotic pressure and as plasma is drawn into the relatively hypertonic interstitium unilateral pulmonary edema may result.[5]

Areas not normally perfused with blood will be relatively protected from the development of pulmonary edema if the patient experiences fluid overload or congestive heart failure. Patients with Swyer-James syndrome, unilateral emphysema, congenital absence of a pulmonary artery, unilateral pulmonary embolus obstructing one pulmonary artery, and prior lobectomy may present with an asymmetrical distribution of pulmonary edema involving predominantly the contralateral lung.[1,3,6,7]

Unilateral pulmonary edema may follow the rapid re-expansion of the lung after the aspiration of a chronic pneumothorax.[1,3,8] Anoxic endothelial damage, highly negative pressures applied to chest tubes, and decreased surfactant production in the collapsed lung have been postulated as possible mechanisms in the development of re-expansion pulmonary edema.[1,3,8] Also, the aspiration of large pleural effusions may produce unilateral edema by similar mechanisms.[1,3]

The sympathetic nervous system has been shown to play a role in the development of pulmonary edema in patients with adult respiratory distress syndrome (ARDS) by causing post capillary venous constriction, thereby raising the capillary hydrostatic pressure.[9] In patients who have had prior thoracic sympathectomies the ipsilateral side becomes protected from pulmonary edema in ARDS.[9]

The main differential diagnostic considerations for an acute unilateral alveolar pattern are unilateral pulmonary edema, pneumonia and pulmonary hemorrhage. The presence of radiographic features of interstitial edema (Kerley's A and B lines) should favor a diagnosis of edema over pneumonia.[1] The clinical history will also be influential in excluding pneumonia and pulmonary hemorrhage.

Summary

Pulmonary edema may occur following a significant alteration in the capillary hydrostatic pressure, endothelial permeability, or plasma oncotic pressure. Conditions which result in a unilateral distribution of edema fluid include congestive heart failure, mitral stenosis, plasma volume overload, unilateral pulmonary vein obstruction, anomalous pulmonary venous return, surgically created left-to-right shunts for the treatment of congenital heart disease, unilateral aspiration, misplaced intravascular catheters and rapid re-expansion of a pneumothorax or large pleural effusion. In our patient with plasma volume overload, patient position played a major role with the edema developing in the dependent or "down" side. Certain conditions such as

Swyer-James syndrome, unilateral emphysema, congenital absence of a pulmonary artery, unilateral pulmonary embolus, prior lobectomy, and prior sympathectomy may protect the lung from developing pulmonary edema resulting in contralateral lung edema only.

References 1. Fraser RG, Pare JAP: Diagnosis of Diseases of the Chest Vol. 2, 2nd ed., Philadelphia, Saunders, 1978: 1201-1296. 2. Leeming BWA: Gravitational edema of the lungs observed during assisted respiration. *Chest* 1973; 64:719-722. 3. Calenoff L, Kruglik G, Woodruff A: Unilateral pulmonary edema. *Radiology* 1978; 126:19-24. 4. Albers WH, Nadas AS: Unilateral chronic pulmonary edema and pleural effusion after systemic-pulmonary artery shunts for cyanotic congenital heart disease. *Am J Cardiol* 1967; 19:861-866. 5. Royal HD, Shields JB, Donati RM: Misplacement of central venous pressure catheters and unilateral pulmonary edema. *Arch Intern Med* 1975; 135:1502-1505. 6. Saleh M, Miles AI, Lasser RP: Unilateral pulmonary edema in Swyer-James syndrome. *Chest* 1974; 66:594-597. 7. Amjad H, Bigman O, Tabor H: Unilateral pulmonary edema. *JAMA* 1974; 229:1094-1095. 8. Humphrey RL, Berne AS: Rapid re-expansion of pneumothorax: a cause of unilateral pulmonary edema. *Radiology* 1970; 96:509-512. 9. Flick MR, Kantzler GB, Block AJ: Unilateral pulmonary edema with contralateral thoracic sympathectomy in the adult respiratory distress syndrome. Chest 1975; 68:736-739.

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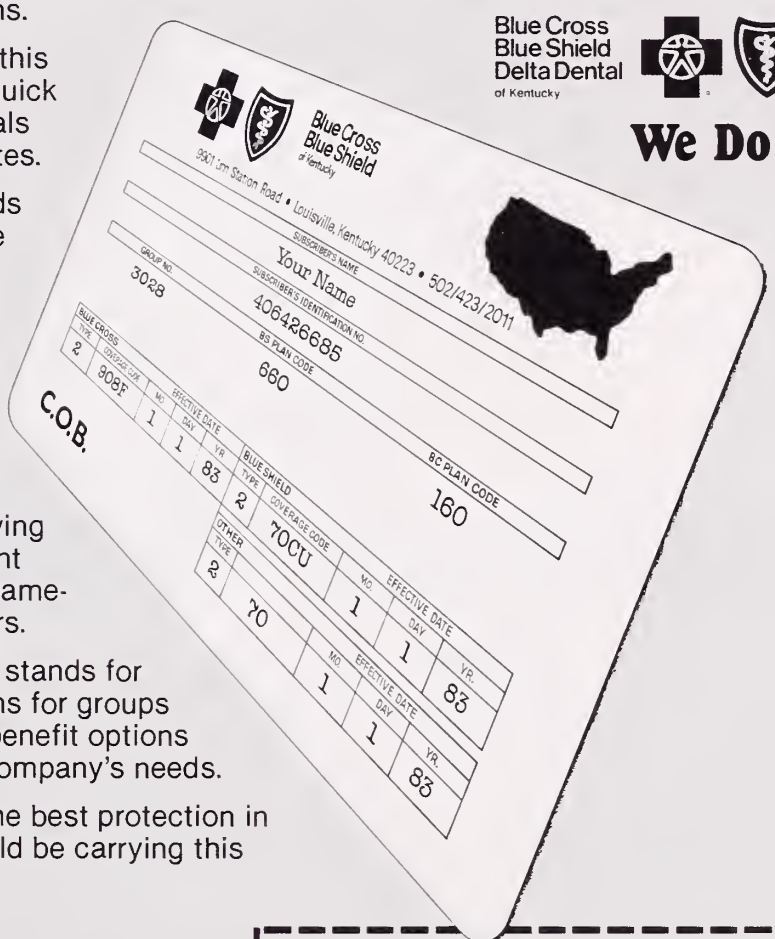
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Coagulopathy Associated With Broad Spectrum Antibiotic Therapy

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A case of coagulopathy and a summary of three other cases associated with broad spectrum and combination antibiotic therapy are being presented. The literature is briefly surveyed and the possible mechanisms and recommendations are discussed.

IN the last few years, there have been several reports of coagulopathy associated with broad spectrum antibiotic therapy.[1,3,4,7] A review of the literature showed that the following antibiotics have been implicated: Ampicillin, Carbenicillin, Gentamicin, Cefamandole, Moxalactam and possibly Cefoxitin and Cefoperazone alone or in combination.[3] The most common bleeding problems reported include: epistaxis, rectal bleeding and upper gastrointestinal bleeding.[4]

During clinical trials with Moxalactam, hypoprothrombinemic bleeding diathesis was noted in 1%.[1] At one of our institutions, this incidence is 24% and includes such problems as retroperitoneal hematoma and hemoptysis.[2]

Case Report

An 86-year-old was admitted through the emergency room with right upper quadrant pain. Past medical history was significant for congestive heart failure and renal insufficiency. Medication includes Digoxin, 0.125 mg p.o. every other day.

On physical examination he had a mildly distended abdomen with marked tenderness over the right upper quadrant and a positive Murphy's sign. Bowel sounds were reported to be hypoactive.

Laboratory examination showed the following: WBC=18,900 with 24 bands, Hematocrit=39.5%, Platelets=adequate, Serum Potassium=4.4 mm/L, BUN=53 mg/dL, Serum Creatinine=2.2 mg/dL, Alkaline Phosphatase, SGOT, Total Bilirubin and Amylase were all within normal limits.

He was admitted with the diagnosis of acute cholecystitis and started on Cefamandole, 1 gm. IV, every six hours. His pain did not resolve. Therefore, he underwent celiotomy which disclosed a necrotic gallbladder with abscess formation. Cholecystectomy with adequate drainage was accomplished.

Post-operatively, he was on the following antibiotics: Cefamandole, 1 gm. IV every eight hours, Clindamycin 300 mg. IV every six hours and he received one dose of Gentamicin, 80 mg. IV. Cultures from the gallbladder showed moderate growth of Escherichia coli and Klebsiella Pneumoniae sensitive to the antibiotics given. No anaerobes were isolated. His course was complicated by wound dehiscence which required operative closure with retention sutures in the operating room. On the eighth post-operative day, he was noted to have a right flank hematoma. The following laboratory studies were reported: PT=38.4 (patient)/29.9 (control), Hematocrit=27%. In the next few days, CT scan showed a retroperitoneal hematoma. Antibiotics were discontinued. He was treated with Aquamephyton 10 mg. intramuscularly and was started on 5 mg. of oral Vitamin K twice a day. Over the course of the week he received four units of packed red cells. His hematocrit remained stable and coagulation studies revealed: PT=12.4 (patient)/12.7 (control) prior to his discharge. He was discharged on the 17th post-operative day with instructions to take Vitamin K, 5 mg. p.o. b.i.d.

TABLE I
SUMMARY OF FOUR CASES AT SCMC

DIAGNOSIS	OPERATIONS	ANTIBIOTICS	COAG. STUDIES	CLIN. SIG. BLEEDING	TREATMENT	END RESULT
1) Acute Gangrenous Cholecystitis	Cholecystectomy	Cefamandole, Gentamicin Clindamycini	↑ PT ↑ PTT (POD # 8)	Right Flank Hematoma	1) Vit. K 2) D/C Antibiotics 3) Transfusion	PT = nl. on discharge; Clinically improved
2) Acute Perforated Appendicitis	Appendectomy	Cefamandole, Gentamicin Clindamycin Moxalactam	↑ PT (POD # 2)	None	1) Vit. K 2) D/C Antibiotics	Pt = nl. on discharge
3) GSW to Abdomen with small bowel perforation	Resection - distal ileum Closure of perforations in small bowel	Cefamandole, Gentamicin Clindamycin	↑ PT (POD # 11)	Retroperitoneal Hematoma	1) Vit. K 2) D/C Antibiotics	PT = nl. on discharge; Clinically improved
4) Sigmoid Volvulus with perforation and gangrenous colon; Parkinson's disease	Transverse loop Colostomy, Sigmoid resection	Cefamandole, Gentamicin, Clindamycin, Moxalactam	↑ PT (POD # 2)	None	1) Vit. K	Death - respiratory failure

A summary of the four cases recently seen on the General Surgical Service at one of our institutions is presented. (Table I)

Discussion

The mechanism of this coagulopathy is believed to be Vitamin K deficiency. This can be secondary to malabsorption syndromes, liver disease, aspirin overdose, dietary insufficiency and heavy alcohol use.[5] In patients with renal insufficiency, prothrombin levels may be low, therefore, coagulation abnormalities are more common.[3] These broad spectrum antibiotics, particularly second and third generation Cephalosporins *(ie,* Cefamandole, Moxalactam, Cefoperazone, and Cefoxitin), are excreted in high concentrations in the bile and could reach gut lumen and alter bowel flora.[3,5] By suppressing the Vitamin K producing gut microflora, they accelerate the decline in the body stores of Vitamin K.[5] At present, there is no evidence that these antibiotics interfere with the hepatic production of Vitamin K dependent clotting factors.[4]

The question of interference with platelet aggregation has also been raised. *In vitro* studies have shown that Cephalosporins can cause platelet dysfunction by interferring with Adenosine Diphosphate induced aggregation.[6] This can cause a prolongation of the bleeding time. There have been reports of this phenomena with the use of Moxalactam and Carbenicillin.[1] The bleeding diathesis have been shown to be reversible upon discontinuation of the drug.[1]

For clinicians confronted with such a problem, the following recommendations are in order: 1) Debilitated and compromised patients should receive prophylactic Vitamin K prior to antibiotic therapy.[5] 2) Coagulopathy associated with the use of these antibiotics can usually be reversed by prompt Vitamin K administration.[5] 3) Patients on both prophylactic low dose heparin and broad spectrum antibiotics should receive prophylactic Vitamin K. 4) Routine baseline coagulation profile before starting antibiotics and frequent coagulation studies should be done. 5) Immediate discontinuation of the suspected antibiotic if coagulopathy occurs.

Summary

Coagulopathies associated with the use of broad spectrum antibiotics are being reported more often. Although most cases are reversible with immediate discontinuation of the drug and Vitamin K administration, at least one fatal gastrointestinal bleeding episode has been reported.[7]

Coagulation studies are indicated. Vitamin K is safe and inexpensive and should be given to avoid a potentially hazardous complication.[3]

References 1. Weitekamp MR, Aber RC: Prolonged Bleeding Times and Bleeding Diathesis Associated with Moxalactam Administration, *JAMA* 249:69-71, 1983. 2. Moxalactam Drug Utilization Review, St. Claire Medical Center, Morehead, Kentucky. 3. Reddy J and Bailey RR: Vitamin K Deficiency Developing in Patients with Renal Failure Treated with Cephalosporin Antibiotics, *NZ Med J* 92:378-380, 1980. 4. Pineo GF, et al: Unexpected Vitamin K Deficiency in Hospitalized Patients, *Can Med Assoc J* 109:880-

883, 1973. 5. Pakter RL, et al: Coagulopathy Associated with the Use of Moxalactam, *JAMA* 248:1100, 1982. 6. Cazenare JP, et al: Effects of Cephalothin and Penicillin G on Platelet Function in Vitro. *Br J Hematol* 35:135-152, 1977. 7. Hooper CA, et al: Gastrointestinal Bleeding Due to Vitamin K Deficiency in Patients on Parenteral Cefamandole, *Lancet* 1:39-40, 1980.

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Health and Safety Tip From the American Medical Association

MARKERS LISTED TO IDENTIFY ALCOHOLICS

How can you tell that a regular, heavy drinker has crossed over the line and become an alcoholic, who no longer can control his or her drinking?

The American Medical Association in its Manual on Alcoholism points to some markers to help identify the alcoholic.

1. Increasing consumption of alcohol, with frequent, perhaps unintended, episodes of intoxication.

2. Drinking to handle problems or relieve symptoms.

3. Obvious preoccupation with alcohol and the frequent need to have a drink.

4. Surreptitious drinking or gulping of drinks.

5. Tendency toward making alibis and weak excuses for drinking.

6. Refusal to concede what is obviously excessive consumption and expressing annoyance when the subject is mentioned.

7. Frequent absenteeism from the job, especially following weekends and holidays.

8. Repeated changes in jobs, particularly if to successively lower levels, or employment in a capacity beneath ability, education and background.

9. Shabby appearance, poor hygiene, and behavior and social adjustment inconsistent with previous levels or expectations.

10. Persistent vague physical complaints without apparent cause, particularly insomnia, stomach upsets, headaches, loss of appetite.

11. Multiple contacts with the health care system with disorders that are alcohol caused or related.

12. Persistent marital and family problems, perhaps with multiple marriages.

13. History of arrests for drunkenness or drunken driving.

Submitted by the KMA Impaired Physicians' Committee

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_____	007	Oral Antidiabetic Medicine
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_____	009	Cephalasparins — Oral
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Don't Let The Spark Go Out

A FAMOUS basketball coach, whose name escapes me for the moment, once said "I don't make men into basketball players. I make basketball players into men." This comment got me to thinking—In what direction do we go when becoming doctors? Do we start with "doctors" and teach them the art of healing? Or do we begin with plain ordinary people who have a spark of compassion and caring and over a lifetime this amber becomes its own quest for fire to be turned into an inferno?

But who has the spark? How do you find it? Is it there in all of us just waiting to be given the breath of life so it can start to glow?

Another "coach" whose name does not escape me was Sir William Osler. He said, "The art in caring for the patient is caring for the patient." When I first heard this medical aphorism I thought the word caring meant "doing for" and only later I realized it meant "feeling for" the patient. (My spark must have gotten a late start.)

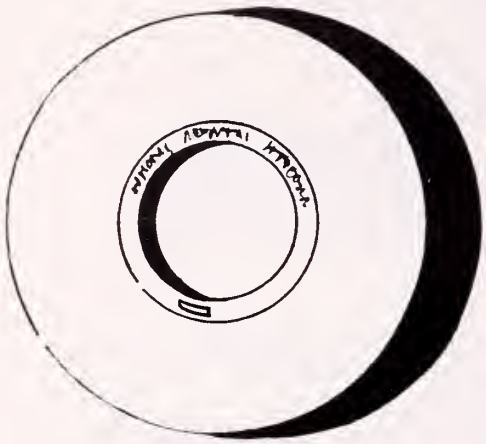
In those days of the early 1900's when the science of medicine was so short and the art so broad, all they had to offer was caring. Nowdays, you can spend $1,000 in tests before you visit the bedside of the patient in the morning.

George Allen of the new Chicago Blitzs (and I don't mean to make this coach day) put it so well to his players. "Men, I don't want perfection . . . just escellence." And as doctors we can hope to do no less. The patient would like a good result, but would also appreciate a chance to talk and to understand. It is almost becoming a medical maxim that the less disease the patient has the more time he needs to be reassured. This is where that spark really begins to glow.

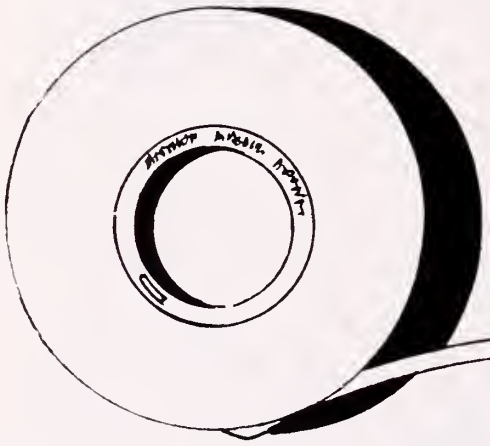
Well, what am I trying to say in all the above ramblings? Simply that there was (and is) something inside us that made us want to be doctors. The same amount of work in other fields of endeavor would bring us far more success and riches. But where else is there that chance for caring? Where else is there that chance for altruism? Where else is there that chance for teaching and being taught?

It matters not whether the fee we receive is the icing or the cake. What does count is that we realize how fortunate we are to be physicians and to be allowed to make a contribution to society.

Milton F. Miller, M.D.



PRACTICE MANAGEMENT



Selection of Software

The most important part of any computer system is the software (programs). This set of instructions is needed before any hardware can become functional and productive.

There are two types of software: operational (system) and support (applications). The operational, or system software, contains the main operating instructions that enable the computer's processor, memory, storage, terminals and printers to work together. This software also manages the support software applications. Support programs usually provide a particular function such as accounting or word processing.

An additional variation in the types of software are whether they are single or multi-user. The single user is usually found on small micro systems that have limited memory and single user access. Multi-user or time-shared software enables a number of operators to use the program at one time. This type of software, although more expensive than a single user, is more economical in the long run because of the number of operators that can access it. Another benefit is the reduction in on-line file storage that would have been necessary with multicopies of a single user software.

Determining Your Applications

The system analysis developed during your office assessment or the review you had commissioned should provide you with a list of questions to direct to vendors about the capabilities of their product. Although your assessment should include all possible applications for the system, some will be impractical and others not cost justifiable. Your application needs should be based on actual need, practicality and functionality. (A program that requires extensive operator involvement in its operation would not be an ideal situation.) It is

important to keep in mind all applications. Even if they are nonessential now, they could become necessary in the future. It is more expensive to add additional parts of a software package at a later date than it is to purchase them initially.

Software Types

Operational software usually comes from the manufacturer and is specifically designed to operate a specific selection of hardware. It is important to determine if any other vendor's hardware (printers or terminals) can be supported by the system software. If it cannot, then you are restricted to making all your future hardware purchases from the manufacturer.

Support applications can either be canned (pre-developed) or designed to meet your specific needs. Personally designed applications are expensive and can be extremely frustrating to the user while trying to debug (remove problems) the operation. Canned software, which may be offered by the vendor or an OEM (Office Equipment Merchandizer) can meet your basic needs, and with minor modifications, the majority of your requirements. The only disadvantage to canned software is that it requires you to redirect your procedures and office routines to reflect the program's design. In some offices this is no problem, but it is a factor to be considered. However, the canned software purchase is the best approach, as it is economical and reduces the problems in becoming and staying operational. Canned software is usually supported and updated, whereas software that you design for your office is subject to change only if you make the changes or request enhancements from your programmer. You usually retain ownership of software you develop, but not precanned software as the vendor usually does. If the vendor does retain ownership to the software and only licenses you to use his product, then it is important to have included in your sales contract a provision to obtain a copy of the program's source code (programmer's code of instructions before computer converts to its language) should the vendor go out of business.

Should you purchase or lease precanned and system's software? The answer is up to you, but some things to consider are: 1) If you purchase a license for a software package, what benefits and services are available to you as a user? 2) How is the software supported? 3) Do you receive updates from the vendor or the manufacturer? 4) Who does the updates on your system? Usually most vendors will offer a software maintenance contract on precanned software to provide many of these services.

Software Maintenance

A maintenance contract on a system software is a must. Enhancements and changes are usually made quarterly by the manufacturer and it is important to incorporate all of these into your system. This maintains a smooth operating system that usually becomes more reliable and faster with each application change.

There are three types of software maintenance:

1. Limited Support License—one time purchase of software contains the latest release but provides no future support. The only time to consider this type of license is if you had a particular application where this provided all of the tasks that were needed, or if you had made an arrangement to obtain future support from another user. The latter may not always be legally acceptable.
2. Basic Supported License—the user maintains a monthly or annual maintenance contract in order to receive all software and documentation changes. The user is responsible for having the software installed.
3. Fully Supported License—the user maintains a monthly or annual maintenance contract that provides the user with all updates in software and documentation and the installation of these updates.

Note: Software changes are distributed on a variety of computer media. The most economical software distribution is magnetic tape, however, tape is usually not utilized on small systems. Therefore, these distributions usually come on a hard disk. Depending on the size of the hard disk utilized by your system, media costs can add an additional $200-$1000 to your maintenance contract. If you are aware of a computer system in your area that uses magtape and it is compatible to your system, you may be able to work out an arrangement and save on the media expense. The fully supported license also contains phone access to vendor or company software specialists to answer your questions and troubleshoot software problems.

The above listed software maintenance contract may not be available on specifically designed software applications. As mentioned, you would be responsible for making the changes or requesting the changes to be made. Therefore, it is advantageous to purchase

canned software when possible, thus minimizing problems and expenses. No matter who you deal with, make sure that they are a reputable firm that has been in business for a number of years. Last year in the United States 400 software companies entered the market with over 600 going out of business. Therefore, it is important to obtain the source code (the set of instructions that a programmer can read and modify) or retain rights to it should the vendor go out of business and sell his product to another vendor. Also make sure that the vendor will be available during the initial installation to either do the actual input of the software or to supervise and train your staff on this operation. This will insure a smooth transition. Certain changes in the hardware may be required before the software will function properly and it is better to put that responsibility on the vendor than on yourself. Obtain at least a 90-day warranty on the installation and operation of the software package. Within that time you should encounter any problems that may be present and can quickly have them resolved.

Finally, make certain that you obtain a full set of documentation on the software product. This should include a user's guide, manager's guide, installation guide and the latest updates, "Release Notes." Although voluminous, these publications will be an invaluable resource to your staff in their utilization of these programs. Even if you have your own software developed, include in your request that the programmer or vendor provide a functional specification (how the program is to be developed, what it will do), a user's guide and programmer's/manager's guide (containing program structure and design) to assist you not only with your use of this application, but to insure that you have all of the necessary information to troubleshoot any problems should the programmer leave or the vendor go out of business. It is like anything else, without an instruction manual you are lost.

In summary, make sure you have produced in writing a list of your software applications and needs. Include these items in any contractual agreement. Have the program demonstrated for you and check the references given you by the manufacturer plus any other users you may be aware of. Ensure that the vendor installs the software and is available for a 90-day period to troubleshoot any problems. Finally, maintain a software contract on your operating software and as many of your applications software as possible.

Items to Consider in a Physician's Application Needs

Accounting

Billing Statement—information it will contain (*ie* basic bill with general information or detailed accounting of the services performed, current balance, insurance payments and special messages.)

Accounts Receivable—number of records or accounts to support, information to be maintained (*ie* name, responsible party, address for home and work, phone number,) if a group practice, which doctor, how many days before prompting to rebill, bank deposit forms, journal reports, cash receipts.

Insurance Processing—claims forms, data base paperless claims, information needed, letter generation for follow-up.

Management Reports—analysis of charges, payments and adjustments, patient listings, procedure code to be used, diagnostic codes, fee profile, special list of active and inactive accounts.

General Ledger and Accounts Payable—preparation of checks, cash disbursement journal, balance sheet, income and expense reports.

Payroll—check preparation, tax reports, W-2 preparation, miscellaneous items or deductions.

General Office Management

Appointment Scheduling—patient schedules, coordination of vacation schedules, preparation of patient information.

Patient Care—history of service, medical data base, therapy, prescribed drugs, reactions and allergies, hospital care.

Word Processing—production of letters, reminder notices, referral letters, chart documentation, mailing lists.

Clinical Applications

Research—data entry, tracking test results, demographic file development, graphic display of statistical results.

Education—continuing medical education.

Clinical Aid—assistance with diagnosis (future application).

Special Applications

Investment analysis, tie in to networks (other computer systems in other locations), education, personal use (games, hobbies, etc.)

This is the fourth in a series of articles by Joe Witherington, Jr., System Manager for KMA and KMIC.

OFTEN INSEPARABLE: PAIN AND ANXIETY

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Pain—triggering anxiety—which accentuates the perception of pain...together they're worse than either alone. And since they're usually both present in musculoskeletal disorders, the best therapy is often a combination of analgesic and anxiolytic agents. Equagesic®-M combines the pain relief of aspirin with the tension-reducing properties of meprobamate—because together they're better than either alone.

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DESCRIPTION. Each tablet contains 200 mg meprobamate and 325 mg aspirin.
INDICATIONS: Adjunct in short-term treatment of pain accompanied by tension and/or anxiety in patients with musculoskeletal disease. Clinical trials demonstrated in these situations relief of pain is somewhat greater than with aspirin alone. Effectiveness in long-term use, i.e. over 4 months, has not been assessed by systematic clinical studies. Physicians should periodically reassess usefulness of drug for individual patients.
CONTRAINDICATIONS: ASPIRIN: Allergic or idiosyncratic reactions to aspirin or related compounds. MEPROBAMATE: Acute intermittent porphyria, allergic or idiosyncratic reactions to meprobamate or related compounds, e.g. carisoprodol, mebutamate, or carbromal.
WARNINGS. ASPIRIN: Use salicylates with extreme caution in patients with peptic ulcer, asthma, coagulation abnormalities, hypoprothrombinemia, vitamin K deficiency, or those on anticoagulants. In rare instances, aspirin in persons allergic to salicylates may result in life-threatening allergic episodes.
MEPROBAMATE: DRUG DEPENDENCE: Physical and psychological dependence, and abuse have occurred. Chronic intoxication from prolonged ingestion of, usually, greater than recommended doses is manifested by ataxia, slurred speech, and vertigo. Therefore, carefully supervise dose and amounts prescribed and avoid prolonged use, especially in alcoholics and others with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of preexisting symptoms, e.g. anxiety, anorexia, or insomnia, or withdrawal reactions, e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and, rarely, convulsive seizures. Such seizures are more likely in persons with CNS damage or preexistent or latent convulsive disorders. Onset of withdrawal symptoms occurs usually within 12 to 48 hours after discontinuation, symptoms usually cease within next 12-to-48-hour period. When excessive dosage has continued for weeks or months, reduce dosage gradually over 1 to 2 weeks rather than stop abruptly. Alternatively, a short-acting barbiturate may be substituted, then gradually withdrawn.
POTENTIALLY HAZARDOUS TASKS: Warn patients meprobamate may impair mental or physical abilities required for potentially hazardous tasks, e.g., driving or operating machinery.
ADDITIVE EFFECTS: Since CNS-suppressant effects of meprobamate and alcohol or meprobamate and other psychotropic drugs may be additive, exercise caution with patients taking more than one of these agents simultaneously.
USAGE IN PREGNANCY AND LACTATION. An increased risk of congenital malformations associated with minor tranquilizers (meprobamate, chlordiazepoxide, and diazepam) during first trimester of pregnancy, has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. The possibility that a woman of childbearing potential may be pregnant at time of institution of therapy should be considered. Advise patients if they become pregnant during therapy or intend to become pregnant to communicate with their physicians about desirability of discontinuing the drug.
Meprobamate passes the placental barrier. If its present both in umbilical-cord blood at or near maternal plasma levels and in breast milk at lactating mothers at concentrations two to four times that of maternal plasma. When use of meprobamate is contemplated in breastfeeding patients, consider the drug's higher concentrations in breast milk as compared to maternal plasma levels.
USAGE IN CHILDREN: Keep preparations with aspirin out of reach of children. Equagesic®-M is not recommended for patients 12 years of age and under.
PRECAUTIONS: ASPIRIN: Salicylates antagonize uricosuric activity of probenecid and sulfinpyrazone. Salicylates are reported to enhance hypoglycemic effect of sulfonylurea antidiabetics.
MEPROBAMATE: Use lowest effective dose, particularly in elderly and/or debilitated, to preclude over-sedation. Meprobamate is metabolized in the liver and excreted by the kidney, to avoid excess accumulation exercise caution in its use in patients with compromised liver or kidney function. Meprobamate occasionally may precipitate seizures in epileptic patients. It should be prescribed cautiously and in small quantities to patients with suicidal tendencies.
ADVERSE REACTIONS: ASPIRIN: May cause epigastric discomfort, nausea, and vomiting. Hypersensitivity reactions, including urticaria, angioneurotic edema, purpura, asthma, and anaphylaxis may rarely occur. Patients receiving large doses of salicylates may develop tinnitus.
MEPROBAMATE: CNS: Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impairment of visual accommodation, euphoria, overstimulation, paradoxical excitement, fast EEG activity.
GI: Nausea, vomiting, diarrhea.
CARDIOVASCULAR: Palpitation, tachycardia, various forms of arrhythmia, transient ECG changes, syncope, hypotensive crisis.
ALLERGIC OR IDIOSYNCRATIC: Milder reactions are characterized by itchy, urticarial, or erythematous maculopapular rash, generalized or confined to the groin. Other reactions include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy, fever, fixed drug eruption with cross-reaction to carisoprodol, and cross-sensitivity between meprobamate/mebutamate and meprobamate/carbromal. Rare, more severe hypersensitivity reactions include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, and anuria. Also, anaphylaxis, exfoliative dermatitis, stomatitis, and proctitis. Stevens-Johnson syndrome and bullous dermatitis have occurred.
HEMATOLOGIC (SEE ALSO "ALLERGIC OR IDIOSYNCRATIC"): Agranulocytosis, aplastic anemia have been reported, although no causal relationship has been established, and thrombocytopenic purpura.
OTHER: Exacerbation of porphyric symptoms.
DOSAGE AND ADMINISTRATION. Usual dose is one or two tablets, 3 to 4 times daily as needed for relief of pain when tension or anxiety is present. Not recommended for patients 12 years of age and under.
OVERDOSAGE: Treatment is essentially symptomatic and supportive. Any drug remaining in the stomach should be removed. Induction of vomiting or gastric lavage may be indicated. Activated charcoal may reduce absorption of both aspirin and meprobamate. Aspirin overdosage produces usual symptoms and signs of salicylate intoxication. Observation and treatment should include management of hyperthermia, specific parenteral electrolyte therapy for ketoacidosis and dehydration, watching for evidence of hemorrhagic manifestations due to hypoprothrombinemia which, if it occurs, usually requires whole-blood transfusions. Suicidal attempts with meprobamate have resulted in drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Some suicidal attempts have been fatal. The following data, reported in the literature and from other sources, are not expected to correlate with each case (considering factors such as individual susceptibility and length of time from ingestion to treatment), but represent usual ranges reported. Acute simple overdose (meprobamate alone): Death has been reported with ingestion of as little as 12 gram meprobamate and survival with as much as 40 gram.
BLOOD LEVELS:
0.5-2.0 mg percent represents usual blood level range after therapeutic doses. The level may occasionally be as high as 3.0 mg percent.
3-10 mg percent usually corresponds to findings of mild-to-moderate symptoms of overdosage, such as stupor or light coma.
10-20 mg percent usually corresponds to deeper coma, requiring more intensive treatment. Some fatalities occur.
At levels greater than 20 mg percent, more fatalities than survivals can be expected.
Acute combined overdose (meprobamate with other psychotropic drugs or alcohol): Since effects can be additive, history of ingestion of a low dose of meprobamate plus any of these compounds (or of a relatively low blood or tissue level) cannot be used as a prognostic indicator.
In cases of excessive doses, sleep ensues rapidly and blood pressure, pulse, and respiratory rates are reduced to basal levels. Any drug remaining in stomach should be removed and symptomatic treatment given. Should respiration or blood pressure become compromised, respiratory assistance, CNS stimulants, and pressor agents should be administered cautiously as indicated. Diuresis, osmotic (mannitol) diuresis, peritoneal dialysis, and hemodialysis have been used successfully in removing both aspirin and meprobamate. Alkalinization of the urine increases excretion of salicylates. Careful monitoring of urinary output is necessary, and caution should be taken to avoid overhydration.
Relapse and death, after initial recovery, have been attributed to incomplete gastric emptying and delayed absorption.
HOW SUPPLIED. Bottles of 50 scored tablets.

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Philadelphia Pa 19101

Maternal Mortality

The patient was a 28-year-old, gravida 2, para 1, Caucasian. She had a normal vaginal delivery in 1975. The expected date of confinement for this pregnancy was the 10th of June 1978. Laboratory studies showed a hemoglobin of 13.2, hematocrit of 39%, VDRL was negative and Rh titers on two occasions were negative. The prenatal course was described as uneventful.

The patient was admitted to the hospital on June 4, 1978. Her vital signs were normal. Temperature 98.6, pulse 88 and blood pressure 90/60; however, she appeared slightly cyanotic and there was difficulty in obtaining a fetal heart rate. The remaining physical examination was within normal limits for a term pregnancy. A vaginal examination revealed the cervix to be three centimeters dilated. An internal monitor was applied to the fetal scalp and no fetal heart rate could be detected. She had no vaginal bleeding. Her blood pressure was 90/60; this coupled with slight abdominal tenderness in absence of fetal heart tones indicated a diagnosis of abruptio placenta. It was felt that a Cesarean section was in order.

At 8:45 PM, shortly after admission, the patient began to complain of severe abdominal pain. Her blood pressure was 92/60. She then vomited and was described as cold and clammy. At 9:10 PM a Cesarean section was done. Upon entering the abdomen a large amount of blood was found in the peritoneal cavity. Examination revealed no bleeding from the pelvic area. A uterine incision was performed and the patient was delivered of a 6 lb. 15 oz. stillborn infant. After the uterus was evacuated and the uterine incision closed, exploration of the abdomen was carried out. A general surgeon was called and joined the operating team within a few minutes. He enlarged the abdominal incision. Examination revealed a ruptured splenic artery aneurysm. Exposure was obtained and the artery was ligated with 2-0 silk. The vein was ligated and the spleen removed to allow better exposure. Gastric vessels were ligated along the greater curvature of the stomach. There was a great amount of persistent bleeding coming from a hematoma about the distal pancreas. Suture ligatures were attempted, however they were not effective. The area was extremely edematous and friable. The blood supply had been compromised to the distal portion of the pancreas so that the distal two to three inches of the pancreas were removed. Hemostasis was attempted using a TA-30 stapling device.

During the procedure, seven units of blood were given. A barely audible blood pressure was detected over a period of an hour. After the eighth unit of blood was given, her systolic blood pressure was up to 60. It was noted that there was little clot formation at bleeding sites. Blood was drawn for clotting factors. Drains were placed in the left subphrenic place space near the tail of the pancreas. There was still some hematoma in the left upper quadrant that did not appear to be enlarging. The abdomen was then closed.

The patient was placed in an Intensive Care Unit. Studies revealed a severe metabolic acidosis with a pH of 7.04. She was placed on a respirator and transfused with fresh frozen plasma, packed cells and fresh O-negative blood, fibrinogen and cryoprecipitate. Her bleeding seemed to be controlled. Her hemoglobin at this time was noted to be 11 grams after a total blood replacement of 22 units. It was necessary to maintain her on a dopamine drip for her blood pressure.

The following day the patient was transferred to a teaching center for further treatment. Examination after transfer revealed a blood pressure of 110/60, a pulse of 150. The patient was alert and seemed to respond well. She was intubated. Her lungs revealed expiratory wheezes. Her cardiac rate was regular. Her abdomen was distended and tender. There were no bowel sounds. Her extremities demonstrated numerous ecchymotic areas from previous intravenous infusions. She had a left radial arterial line. Her abdominal drains were irrigated and revealed purulent material. After a period of stabilization with intravenous fluids and further antibiotic therapy, the patient was taken to surgery with a preoperative diagnosis of intraabdominal sepsis possible subdiaphragmatic collection. Findings at surgery revealed gangrenous loops of bowel from the ligament of Treitz to the cecum. There were additional patches of gangrenous bowel throughout the colon to the descending colon. It was not felt that the area was resectable. The situation was discussed with the family. She died on June 8, 1978. The cause of death was listed as mesentery thrombosis secondary to a rupture of the splenic artery aneurysm during pregnancy.

The death was classified by the Maternal Mortality as an obstetric-indirect death resulting from previous existing disease or a disease that had developed during pregnancy.

Spontaneous rupture of a splenic artery aneurysm is an uncommon and usually catastrophic event in

pregnancy.[1] Sudden collapse of a pregnant patient may be diagnosed as pulmonary or amniotic fluid embolism. Abdominal pain or back pain with anemia may be diagnosed as abruptio placenta, uterine rupture or even a dissecting aneurysm. The decision to operate must be based on a clinical evaluation.

Splenic artery aneurysms as in the above case have been described as occurring in 0.16% of general autopsies. They are twice as common in females than males.[2] They are second in frequency only to abdominal aortic aneurysms. Etiologic factors are portal hypertension, history of cirrhosis or hepatitis, grand multiparity or trauma.

Twelve percent of splenic artery aneurysms rupture in the first or second trimester—69% in the third trimester—13% in labor and 6% postpartum.[3] The mortality is high because hemorrhage occurs so rapidly and rupture of the splenic artery aneurysm is not suspected.

Usually there is sudden, severe upper abdominal pain in the left upper quadrant with rapid blood loss, collapse and shock. About 25% of the cases will "double rupture," *ie*, they bleed with partial tamponading. The condition will then stabilize with some degree of recovery. At varying intervals (from minutes to 55 days) the false aneurysm bleeds again with exsanguinating intraperitoneal hemorrhage through foramen of Winslow.[4] A past history of hepatitis should alert the physician to the possibility of a ruptured splenic artery aneurysm as the pregnancy progresses. The peak blood volume of pregnancy coinciding with portal hypertension probably can trigger the rupture of a splenic artery aneurysm.

Treatment depends upon two things: restoration of the blood volume and ligation of the bleeding vessel. Tamponading cannot be definitive treatment. Location of the aneurysm and tissue stained by blood in which the anatomy has been distorted by hematoma can be extremely difficult, but it is absolutely essential. The best time to control a hemorrhage is when bleeding is first encountered. In the present case, it is felt that this patient developed mesentery artery thrombosis secondary to the hypovolemia she experienced. This is indeed a most unusual and difficult complication of pregnancy.

References 1. Barnett JM, Caldwell BJ: Association of portal hypertension and ruptured splenic artery aneurysm in pregnancy. *Obstet Gynec* 57:255-257, 1981. 2. Kreel L: The recognition and incidence of splenic artery aneurysm; a historial review. *Aust Radial* 16:126-136, 1972. 3. MacFarlane J, Tharbjarmarson B: Rupture of splenic artery aneurysm during pregnancy. *Am J Obstet Gynec* 95:1025, 1966. 4. Schug J, Rankin RP: Rupture of a splenic artery aneurysm in pregnancy. Report of a survivor and review of the literature. *Obstet Gynec* 25:717-723, 1965.

Written by Charles R. Oberst, M.D.
Edited by John W. Greene, Jr., M.D.

Anxious patients improve in just a few days



And what is more reassuring to an excessively anxious patient than medication that promptly starts to relieve his discomforting symptoms? Valium® (diazepam/Roche) begins working within 30 to 90 minutes. Patients continue to improve in just a few days, and relief continues throughout the course of treatment.

There are other important benefits with Valium as well—along with its broad clinical range, Valium has an efficacy/safety profile that few, if any, drugs can match. This record has been achieved with extensive clinical experience, undoubtedly including yours. And, as you must have observed, side effects more serious than drowsiness, fatigue or ataxia rarely occur. Nevertheless, as with any CNS-acting agent, patients should be cautioned about driving, operating hazardous machinery or ingesting alcohol or other CNS-depressant drugs while taking Valium.

Yet another benefit Valium affords is flexibility. Available in 2-mg, 5-mg and 10-mg scored tablets, Valium enables you to titrate dosage to individual patient needs. For the geriatric patient, a starting dosage of 2 to 2½ mg once or twice a day is recommended. And, for patients who forget or skip medication, you can prescribe Valrelease™ (diazepam/Roche) 15-mg slow-release capsules, knowing that Valrelease will assure all the benefits of Valium 5 mg *t.i.d.* with the convenience of once-a-day dosage.

Discontinuation of Valium (or Valrelease) is typically as smooth as its start in short-term therapy. However, Valium and Valrelease should be discontinued gradually after more extended treatment. As you diminish dosage, the built-in tapering action of Valium and Valrelease will help avoid rapidly recurring anxiety symptoms and symptoms of withdrawal, and will help ease the patient's transition to independent coping when therapeutic goals have been achieved.

...that's one of the unique benefits of

Valium® IV

diazepam/Roche

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For a summary of product information, please turn the page.

ROCHE®

Valium® (diazepam/Roche) Ⓝ Tablets
Valrelease™ (diazepam/Roche) Ⓝ slow-release Capsules
Injectable Valium® (diazepam/Roche) Ⓝ

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of anxiety disorders, or short-term relief of symptoms of anxiety. Anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic. Symptomatic relief of acute agitation, tremor, impending or acute delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: relief of skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders: athetosis; stiff-man syndrome. *Oral forms* may be used adjunctively in convulsive disorders, but not as sole therapy. *Injectable form* may also be used adjunctively in: status epilepticus; severe recurrent seizures; tetanus; anxiety, tension or acute stress reactions prior to endoscopic/surgical procedures; cardioversion.

The effectiveness of diazepam in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindications: Tablets or capsules in children under 6 months of age; known hypersensitivity; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: As with most CNS-acting drugs, caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of predisposition to habituation/dependence.

> ***Usage in Pregnancy:*** **Use of minor tranquilizers during first trimester should almost always be avoided because their use is rarely a matter of urgency and because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

ORAL: Advise patients against simultaneous ingestion of alcohol and other CNS depressants.

Not of value in treatment of psychotic patients; should not be employed in lieu of appropriate treatment. When using oral forms adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may be associated with temporary increase in frequency and/or severity of seizures.

INJECTABLE: *To reduce the possibility of venous thrombosis, phlebitis, local irritation, swelling and, rarely, vascular impairment when used I.V.: inject slowly, taking at least one minute for each 5 mg (1 ml) given; do not use small veins, i.e., dorsum of hand or wrist; use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Injectable Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.*

Administer with extreme care to elderly, very ill, those with limited pulmonary reserve because of possibility of apnea and/or cardiac arrest; concomitant use of barbiturates, alcohol or other CNS depressants increases depression with increased risk of apnea; have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosage at least 1/3, administer in small increments. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs.

Has precipitated tonic status epilepticus in patients treated for petit mal status or petit mal variant status. Not recommended for OB use.

Efficacy/safety not established in neonates (age 30 days or less); prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence; can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of diazepam, *i.e.*, phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function; avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed and tolerated).

The clearance of diazepam and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.

INJECTABLE: Although promptly controlled, seizures may return; readminister if necessary; not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures, use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported, should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, observed in patients during and after diazepam therapy are of no known significance.

INJECTABLE: Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia. In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm/pain in throat or chest have been reported.

Dosage: Individualize for maximum beneficial effect.

ORAL *Adults:* Anxiety disorders, relief of symptoms of anxiety—Valium (diazepam/Roche) tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 Valrelease capsules (15 to 30 mg) daily. Acute alcohol withdrawal—tablets, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; or 2 capsules (30 mg) the first 24 hours, then 1 capsule (15 mg) daily as needed. Adjunctively in skeletal muscle spasm—tablets, 2 to 10 mg t.i.d. or q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily. Adjunctively in convulsive disorders—tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily.

Geriatric or debilitated patients: Tablets—2 to 2½ mg 1 or 2 times daily initially, increasing as needed and tolerated (see Precautions). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose.

Children: Tablets—1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use in children under 6 months). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose (not for use in children under 6 months).

INJECTABLE: Usual initial dose in older children and adults is 2 to 20 mg I.M. or I.V., depending on indication and severity. Larger doses may be required in some conditions (tetanus). In acute conditions injection may be repeated within 1 hour, although interval of 3 to 4 hours is usually satisfactory. Lower doses (usually 2 to 5 mg) with slow dosage increase for elderly or debilitated patients and when sedative drugs are added. (See Warnings and Adverse Reactions.)

For dosages in infants and children see below; have resuscitative facilities available.

I.M. use: by deep injection into the muscle

I.V. use: inject slowly, take at least one minute for each 5 mg (1 ml) given. Do not use small veins, i.e., dorsum of hand or wrist. Use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute Valium with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.

Moderate anxiety disorders and symptoms of anxiety, 2 to 5 mg I.M. or I.V., and severe anxiety disorders and symptoms of anxiety, 5 to 10 mg I.M. or I.V., repeat in 3 to 4 hours if necessary; acute alcohol withdrawal, 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary. Muscle spasm, in adults, 5 to 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary (tetanus may require larger doses); in children *administer I.V. slowly*; for tetanus in infants over 30 days of age, 1 to 2 mg I.M. or I.V., repeat every 3 to 4 hours if necessary; in children 5 years or older, 5 to 10 mg repeated every 3 to 4 hours as needed. Respiratory assistance should be available.

Status epilepticus, severe recurrent convulsive seizures (I.V. route preferred), 5 to 10 mg adult dose administered slowly, repeat at 10- to 15-minute intervals up to 30 mg maximum. Repeat in 2 to 4 hours if necessary, keeping in mind possibility of residual active metabolites. Use caution in presence of chronic lung disease or unstable cardiovascular status. Infants (over 30 days) and children (under 5 years), 0.2 to 0.5 mg slowly every 2 to 5 min., up to 5 mg (I.V. preferred). Children 5 years plus, 1 mg every 2 to 5 min., up to 10 mg (slow I.V. preferred); repeat in 2 to 4 hours if needed. EEG monitoring may be helpful.

In endoscopic procedures, titrate I.V. dosage to desired sedative response, generally 10 mg or less but up to 20 mg (if narcotics are omitted) immediately prior to procedure; if I.V. cannot be used, 5 to 10 mg I.M. approximately 30 minutes prior to procedure. As preoperative medication, 10 mg I.M.; in cardioversion, 5 to 15 mg I.V. within 5 to 10 minutes prior to procedure. Once acute symptomatology has been properly controlled with injectable form, patient may be placed on oral form if further treatment is required.

Management of Overdosage: Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure; employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension. Dialysis is of limited value.

How Supplied:

ORAL: Valium scored tablets—2 mg, white; 5 mg, yellow; 10 mg, blue—bottles of 100 and 500; Prescription Paks of 50, available in trays of 10; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25 and in boxes containing 10 strips of 10.

Valrelease (diazepam/Roche) slow-release capsules—15 mg (yellow and blue), bottles of 100; Prescription Paks of 30.

INJECTABLE: Ampuls, 2 ml, boxes of 10; Vials, 10 ml, boxes of 1; Tel-E-Ject® (disposable syringes), 2 ml, boxes of 10. Each ml contains 5 mg diazepam, compounded with 40% propylene glycol, 10% ethyl alcohol, 5% sodium benzoate and benzoic acid as buffers, and 1.5% benzyl alcohol as preservative.

ROCHE®

Book Reviews

Handbook of Poisoning

Robert H. Dreisbach

Lange Medical Publications, 1983, 632 pages

This handbook honors its ancestors admirably. Probably the task of refurbishing this book each triennial period is onerous, but the author has accomplished his task.

Prophylaxis is emphasized throughout, not that this is always possible. General considerations for diagnosis and management of poisoning cases is discussed fully and supplemented with tables to expedite emergency treatment. These could be more utilized if denoted with either different color paper or tabs to accentuate their position in the book.

In encyclopedic fashion the poisons are then discussed starting with agricultural substances. These are mostly pesticides, though their chemistries are different as are their antidotes.

Industrial hazards are a potpouri of compounds, inorganic and organic. This section is most vulnerable to omission, not by intent but unavoidable when the evolution of industries continues. Remarkably even particulate air pollution is given a rightful place among the poisons.

Our households contain many substances that are potentially dangerous. In tribute to the active poison control centers this section is liberally tabled and clarity is at an optimum. Medicinal products have a checkered history, with many instances of toxicity to their credit. For some medicines evacuation of the GI tract is sufficient to absolve them of harmful effects. For others, precise antidotes are required. These chapters are filled with such details and are integral to the physician caring for patients.

A short concluding section deals with biological poisoning from animals and plants. Although the drama of the snakebite or mushroom injestion is well known, other zoological malevolents are lurking.

Both front and back covers are printed with first-aide and local information making this book from beginning to end literally a "book of knowledge."

Current Medical Diagnosis & Treatment

Krupp & Chatton

Lange Medical Publications, 1,130 pages

As flagship for the Lange Medical Publications this book is by far the most read and widely disseminated of its kind. Seven translations have been completed, not to mention its annual refurbishing since 1962. Although the price has inflated, so has the information it harbors and the pages it binds. Little space is allowed for illustrations, tables and the like, because this book is not meant to be skeletal, but rather fully representative of current medical dogma. After reading a chapter and the references given, the user will be well schooled, if not expert in a particular subject.

Nevertheless, there are sacrifices made in being ecumenical. Thirty-eight authors are asked to contribute their expertise, yet sacrifice the individual style to the editors judgement. Several chapters seemed to be orphans not having any related style. Few readers consume this book from beginning to end, so much literary license is permissable. That half the book uses the organ system approach to construct a teaching model while the other half uses disease processes themselves result in frequent redundancy of material. Again, this could be criticized or lauded as a didactic method.

This book is meant for those of us who yearn for an efficient home current medical education program. Also the junior medical student or non physician people would find this book to be educational.

A review book will always be a distillation of what is known. With the references given we are readily led to more detailed information.

Collecting and assimilating these regularly produced editions is a most gratifying exploit.

Stephen Z. Smith, M.D.
Assistant Scientific Editor


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DIRECTIONS Take 1 or 2 tablets
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Some Insurers Leave You With Only One Remedy.

Not at ICA. As a specialist in professional liability insurance, we offer coverage and service most multiline carriers cannot. Our background and understanding in this one line of insurance has enabled us to successfully expand to over 30 states across the nation.

Other malpractice insurance companies promote expedient settlements which often lead to higher premiums. At ICA, we believe the best way to control the cost of professional liability insurance is to fight frivolous claims utilizing highly qualified claims attorneys, never a claims adjuster. Additionally, we never settle a claim without your consent.

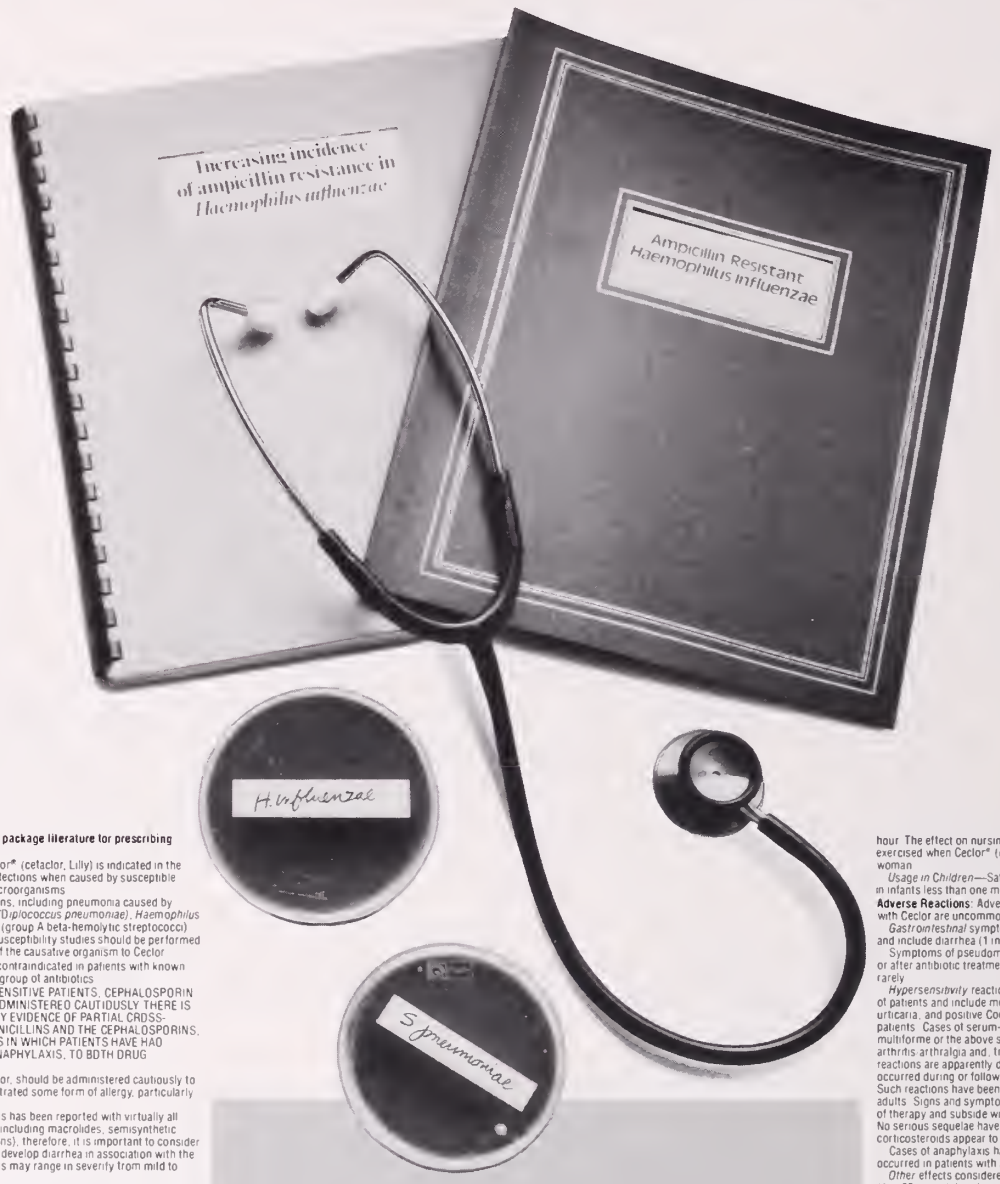
Our comprehensive Occurrence coverage with limits up to $5/5 million is another example of our commitment to the medical profession. Most importantly, your rates are largely based on claims experience in your state.

Superior coverage, competitive rates and outstanding service are just a few of the "remedies" available through ICA. For further information, contact: Insurance Corporation of America, 4295 San Felipe, Houston, Texas 77027. Phone 1-800-231-2615; in Texas call 1-800-392-9702.

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An added complication... in the treatment of bacterial bronchitis*



Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor
Pulvules®, 250 and 500 mg

Brief Summary. Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions*—If an allergic reaction to Ceclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers—Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor® (cefaclor, Lilly) is administered to a nursing woman.

Usage in Children—Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations of SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

* Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

References

1. Antimicrob. Agents Chemother., *8*: 91, 1975
2. Antimicrob. Agents Chemother., *11*: 470, 1977
3. Antimicrob. Agents Chemother. *13*: 584, 1978
4. Antimicrob. Agents Chemother., *12*: 490, 1977
5. Current Chemotherapy (edited by W. Siegenthaler and R. Luthy), II: 880. Washington, D.C.: American Society for Microbiology, 1978
6. Antimicrob. Agents Chemother. *13*: 861, 1978
7. Data on file, Eli Lilly and Company
8. Principles and Practice of Infectious Diseases (edited by G.L. Mandell, R.G. Douglas, Jr., and J.E. Bennett), p. 487. New York: John Wiley & Sons, 1979

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

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Take its Measure

In Arthritis
RUFEN®
(ibuprofen)



measures up... at a reasonable cost!

Far-Reaching Effectiveness for Arthritis Patients

Rufen® offers your patient effective relief, both as first therapy or after other potent medications fail. In comparable trials with indomethacin[1,2] sulindac,[3,4] and other antiarthritic agents,[5-7] findings consistently demonstrate high improvement with ibuprofen (Rufen) by such objective and subjective measures as reduction of swelling, improved grip strength,[1] reduced morning stiffness,[1] better ambulation,[1] improved range of motion,[4] reduction and relief of pain.[1-5]

Low Score in Side-Effect Risk

Through more than 13 years of worldwide use, ibuprofen continues to demonstrate exceptional gastrointestinal tolerance vis-a-vis aspirin and other antiarthritic agents. In a recent series of double-blind trials of ibuprofen, naproxen and other NSAID's, only placebo was shown to produce less G.I. lesions than ibuprofen on gastroscopic examination.[5]

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See next page for brief summary of prescribing information.

Measure RUFEN® (ibuprofen) for GI Tolerance

Even in arthritic patients with a history of GI disease



And Rufen® Measures Up Best

Over a five-year period, ibuprofen was administered to 64 patients with known peptic ulceration and 42 with known gastric intolerance to other antiarthritis drugs.

Twenty-six patients remained in treatment, 23 left treatment following remission, and 35 dropped out for reasons unrelated to side effects. In this specially selected group of GI-intolerant patients, only 13 (12.3%) discontinued ibuprofen because of GI intolerance.

"Any drug used in the control of the symptoms of the chronic arthritis must be tolerated for long periods without undue gastric discomfort...From this study it appears that ibuprofen is eminently suitable."[8]

Peptic ulceration and GI bleeding, sometimes severe, have been reported. Rufen® should be given under close supervision to patients with a history of upper GI tract disease.

References: 1. Royer GL, Jr, Moxley TE, Hearron MS, et al: *J Int Med Res* 3:158-171, 1975. 2. Royer, GL, Jr, Moxley TE, Hearron MS, et al: *Curr Therap Res* 17:234-248, 1975. 3. Brackertz B, Busson M: *Brit J Clin Pract* 32:77-80, 1978. 4. Tausch J, Fasching U: *Brit J Clin Pract: A symposium supplement, IXTH European Congress of Rheumatology*, Wiesbaden, Germany, Sept 2-8, 1979, pp 53-61. 5. Lanza FL, Royer GL, Jr, Nelson RS et al: *Dig Dis & Sci* 24:823-828, 1979. 6. Pavelka K, Susta A, Vojtisek A et al: *Rheumatol and Rehab* 12:68-73, 1973. 7. Tretenhahn W: *Brit J Clin Pract: A symposium supplement, IXTH European Congress of Rheumatology*, Wiesbaden, Germany, Sept 2-8, 1979, pp 45-52. 8. Cardoe N: Curr Med Res & Opinion 3:518-520, 1975.

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RUFEN® (ibuprofen) Tablets

INDICATIONS AND USAGE: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in the long-term management of these diseases. Safety and effectiveness have not been established for Functional Class IV rheumatoid arthritis

Relief of mild to moderate pain. Treatment of primary dysmenorrhea.

CONTRAINDICATIONS. Patients hypersensitive to ibuprofen, or with the syndrome of nasal polyps, angio-edema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory drugs (see WARNINGS)

WARNINGS: Anaphylactoid reactions have occurred in patients hypersensitive to aspirin (see CONTRAINDICATIONS). Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration, perforation, or gastrointestinal bleeding can end fatally; however, an association has not been established. Rufen should be given under close supervision to patients with a history of upper gastrointestinal tract disease, and only after consulting the ADVERSE REACTIONS

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be attempted. If Rufen must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding

PRECAUTIONS: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If developed, discontinue Rufen and administer an ophthalmologic examination.

Fluid retention and edema have been associated with Rufen; caution should be used in patients with a history of cardiac decompensation.

Rufen can inhibit platelet aggregation and prolong bleeding time. Use with caution in patients with intrinsic coagulation defects and those taking anticoagulants.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy, this therapy should be tapered slowly when adding Rufen.

DRUG INTERACTION: *Coumarin-type anticoagulants.* The physician should be cautious when administering Rufen to patients on anticoagulants

Aspirin. Concomitant use may decrease Rufen blood levels.

PREGNANCY AND NURSING MOTHERS: Rufen should not be taken during pregnancy nor by nursing mothers.

ADVERSE REACTIONS: Incidence greater than 1%. Gastrointestinal: The most frequent adverse reaction is gastrointestinal (4 to 16%), includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of GI tract (bloating and flatulence). Central Nervous System: dizziness*, headache, nervousness. Dermatologic: rash* (including maculopapular type), pruritus. Special Senses: tinnitus. Metabolic: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS). *Incidence 3% to 9%

Incidence less than 1 in 100. Gastrointestinal: gastric or duodenal ulcer with bleeding and/or perforation, hemorrhage, melena. Central Nervous System: depression, insomnia, confusion, emotional lability, somnolence, aseptic meningitis with fever and coma. Dermatologic: vesiculobullous eruptions, urticaria, erythema multiforme, Stevens-Johnson syndrome and alopecia. *Special Senses:* hearing loss, amblyopia (blurred and/or diminished vision, scotomata and/or changes in color vision) [see PRECAUTIONS]. Hematologic: neutropenia, agranulocytosis, aplastic anemia, hemolytic anemia (sometimes Coombs' positive), thrombocytopenia with or without purpura eosinophilia, decreases in hemoglobin and hematocrit. Cardiovascular: congestive heart failure in patients with marginal cardiac function, elevated blood pressure. Allergic: syndrome of abdominal pain, fever, chills, nausea and vomiting; anaphylaxis, bronchospasms (see CONTRAINDICATIONS). Renal: acute renal failure in patients with preexisting significantly impaired renal function, decreased creatinine clearance, polyuria, azotemia, cystitis, hematuria. Miscellaneous: dry eyes and mouth, gingival ulcers, rhinitis.

Causal relationship unknown. Gastrointestinal: pancreatitis. Central Nervous System: paresthesias, hallucinations, dream abnormalities, pseudotumor cerebri. Dermatologic: toxic epidermal necrolysis, photoallergic skin reactions. Special Senses: conjunctivitis, diplopia, optic neuritis. Hematologic: bleeding episodes. Allergic: serum sickness, lupus erythematosus syndrome, Henoch-Schonlein vasculitis. Endocrine: gynecomastia, hypoglycemia. Cardiovascular: arrhythmias (sinus tachycardia, bradycardia, and palpitations). Renal: renal papillary necrosis.

OVERDOSAGE: Acute overdosage, the stomach should be emptied. Rufen is acidic and excreted in the urine, alkaline diuresis may benefit.

DOSAGE AND ADMINISTRATION: Rheumatoid arthritis and osteoarthritis, including flareups of chronic disease: Suggested dosage 400 mg t.i.d. or q.i.d.

Dysmenorrhea: 400 mg every 4 hours as necessary

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for the relief of pain. *Do not exceed 2,400 mg per day*

CAUTION: Federal law prohibits dispensing without prescription

Auxiliary



Mary Veurink

MARY Veurink was recently installed as President of AKMA by Mrs. John Bates, President-Elect of the American Medical Association Auxiliary. The 61st Annual Convention was held in Lexington, April 18-20. Mary is the wife of Doctor Charles Veurink who has an orthopedics practice in Richmond. They have an eight-year-old son, Dean, and a four-year-old daughter, Claire.

Mary has been an active auxilian on both local and state levels for eight years. In 1976 she helped reorganize the Madison County Auxiliary and served as its first president. She participated in the Auxiliary's Pediatric Orientation Project; Madison County's School Scoliosis Screening, and several community fund-raising events.

On the State level, she has been a member of the AKMA Board for six years. As the Members-At-Large Coordinator, she was responsible for all state members who do not belong to organized auxiliaries. She believes that this position not only enabled her to have contact with physicians' spouses all over Kentucky, but also served as a good review of Kentucky geography.

Mary was Second Region Vice President for three years co-ordinating the county auxiliaries in the eastern area of the state. She has developed a great concern for the need for physicians' spouses to belong to, and participate in, our organization.

She has attended the National Leadership Confluence twice, once as President of the Madison County Auxiliary and again as AKMA President-Elect. Mary has also been a delegate to the AMAA Convention and attended the AMAA Conference for State President-Elects. She believes that the insight and training gained from these national meetings has been one of the greatest benefits of belonging to the medical auxiliaries. It is her hope to communicate these benefits to all state members this year.

A native of Shelby County, Mary graduated from the University of Kentucky with a B.S. in Nursing. She has practiced nursing in direct patient care and also in inpatient and outpatient management situations. She works in her husband's office in a management and nursing consultant capacity. She takes an active part in her community and has done volunteer work for the League of Women Voters, the Parent Teacher Organization, and the Patty A. Clay Hospital Auxiliary. For relaxation she enjoys tennis, gardening and bowling. Doctor Veurink is Team Physician for Eastern Kentucky University and the entire family travels to their games.

Mary feels fortunate to be serving as AKMA President during the year when the "Shape up for Life" program is focusing on "Children and Youth" because much of her life revolves around this group. We will be addressing such concerns as child abuse, drug abuse, school health education, and health screening. We will also continue our support of programs dealing with physician impairment, CPR, AMA-ERF and other health-related projects. Her theme for the year is "Celebrate Health."

It is her hope that by the end of this year we can also celebrate not only retaining our present membership, but an increase in involvement throughout the state. Mary is looking forward to working with the KMA, the AKMA Board of Directors, the organized auxiliaries and the Members-At-Large.

Mary Evans (Mrs. Carl T.)
Bluegrass News Editor

ESPECIALLY FOR
KENTUCKY PHYSICIANS

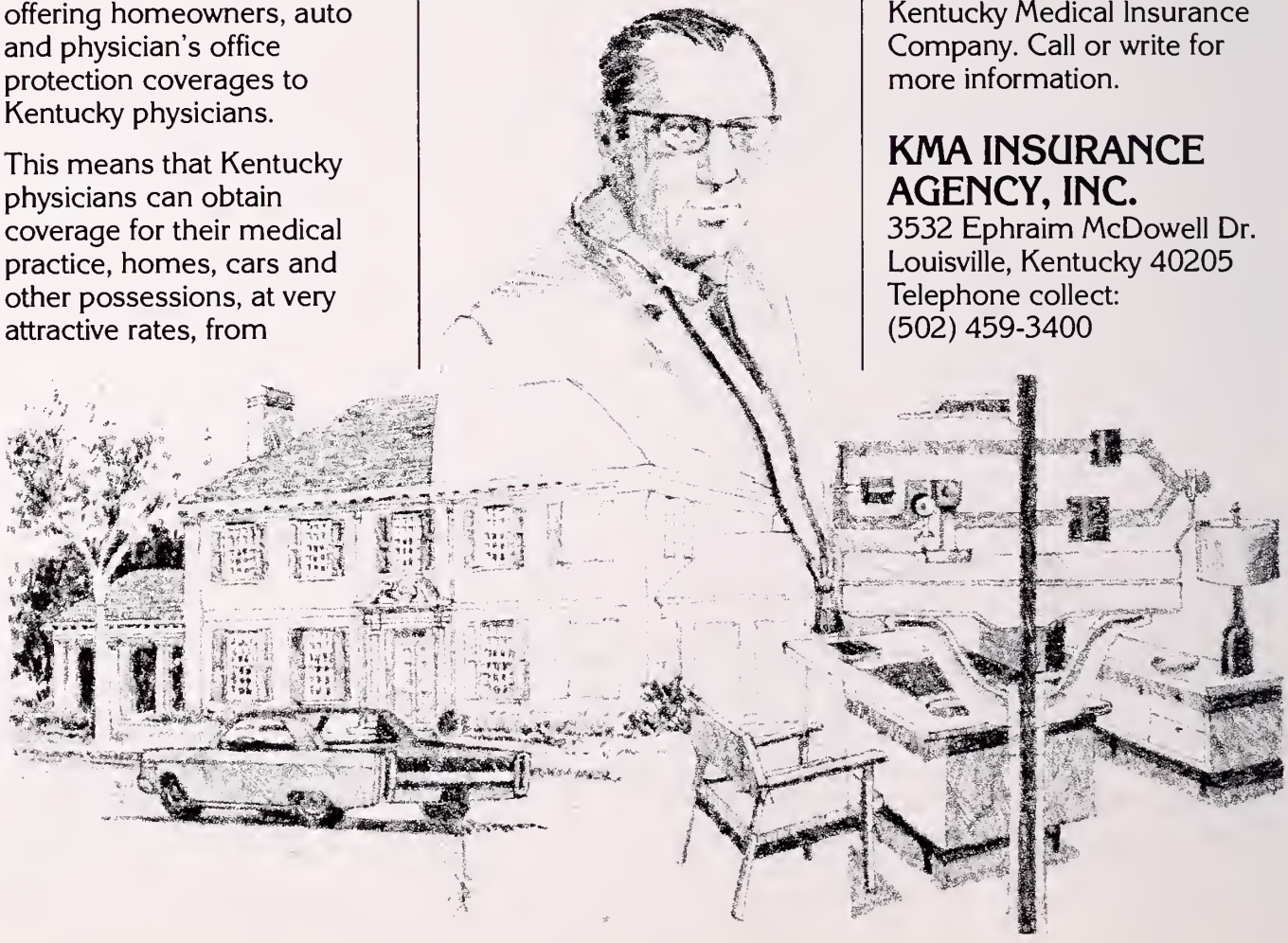
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Cumulative sedative effects are rare

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Agent of change

Ativan®

for (lorazepam) Ⓒ IV

Anxiety

See important information on following page.

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NEW TABLET DESIGN 0.5, 1.0 and 2.0 mg

Brief Summary of Prescribing Information.

Indications and Usage: Management of anxiety disorders or short-term relief of symptoms of anxiety or anxiety associated with depressive symptoms. Anxiety or tension associated with stress of everyday life usually does not require treatment with an anxiolytic.

Effectiveness in long-term use, i.e., more than 4 months, has not been assessed by systematic clinical studies. Reassess periodically usefulness of the drug for the individual patient.

Contraindications: Known sensitivity to benzodiazepines or acute narrow-angle glaucoma.

Warnings: Not recommended in primary depressive disorders or psychoses. As with all CNS-acting drugs, warn patients not to operate machinery or motor vehicles, and of diminished tolerance for alcohol and other CNS depressants.

Physical and Psychological Dependence: Withdrawal symptoms like those noted with barbiturates and alcohol have occurred following abrupt discontinuance of benzodiazepines (including convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Addiction-prone individuals, e.g. drug addicts and alcoholics, should be under careful surveillance when on benzodiazepines because of their predisposition to habituation and dependence. Withdrawal symptoms have also been reported following abrupt discontinuance of benzodiazepines taken continuously at therapeutic levels for several months.

Precautions: In depression accompanying anxiety, consider possibility for suicide.

For elderly or debilitated patients, initial daily dosage should not exceed 2mg to avoid oversedation. Terminate dosage gradually since abrupt withdrawal of any antianxiety agent may result in symptoms like those being treated: anxiety, agitation, irritability, tension, insomnia and occasional convulsions. Observe usual precautions with impaired renal or hepatic function. Where gastrointestinal or cardiovascular disorders coexist with anxiety, note that lorazepam has not been shown of significant benefit in treating gastrointestinal or cardiovascular component. Esophageal dilation occurred in rats treated with lorazepam for more than 1 year at 6mg/kg/day. No effect dose was 1.25mg/kg/day (about 6 times maximum human therapeutic dose of 10mg/day). Effect was reversible only when treatment was withdrawn within 2 months of first observation. Clinical significance is unknown; but use of lorazepam for prolonged periods and in geriatrics requires caution and frequent monitoring for symptoms of upper G.I. disease. Safety and effectiveness in children under 12 years have not been established.

ESSENTIAL LABORATORY TESTS: Some patients have developed leukopenia, some have had elevations of LDH. As with other benzodiazepines, periodic blood counts and liver function tests are recommended during long-term therapy.

CLINICALLY SIGNIFICANT DRUG INTERACTIONS: Benzodiazepines produce CNS depressant effects when administered with such medications as barbiturates or alcohol.

CARCINOGENESIS AND MUTAGENESIS: No evidence of carcinogenic potential emerged in rats during an 18-month study. No studies regarding mutagenesis have been performed.

PREGNANCY: Reproductive studies were performed in mice, rats, and 2 strains of rabbits. Occasional anomalies (reduction of tarsals, tibia, metatarsals, malrotated limbs, gastroschisis, malformed skull and microphthalmia) were seen in drug-treated rabbits without relationship to dosage. Although all these anomalies were not present in the concurrent control group, they have been reported to occur randomly in historical controls. At 40mg/kg and higher, there was evidence of fetal resorption and increased fetal loss in rabbits which was not seen at lower doses. Clinical significance of these findings is not known. However, increased risk of congenital malformations associated with use of minor tranquilizers (chlordiazepoxide, diazepam and meprobamate) during first trimester of pregnancy has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, use of lorazepam during this period should almost always be avoided. Possibility that a woman of child-bearing potential may be pregnant at institution of therapy should be considered. Advise patients if they become pregnant to communicate with their physician about desirability of discontinuing the drug. In humans, blood levels from umbilical cord blood indicate placental transfer of lorazepam and its glucuronide.

NURSING MOTHERS: It is not known if oral lorazepam is excreted in human milk like other benzodiazepines. As a general rule, nursing should not be undertaken while on a drug since many drugs are excreted in milk.

Adverse Reactions, if they occur, are usually observed at beginning of therapy and generally disappear on continued medication or on decreasing dose. In a sample of about 3,500 anxious patients, most frequent adverse reaction is sedation (15.9%), followed by dizziness (6.9%), weakness (4.2%) and unsteadiness (3.4%). Less frequent are disorientation, depression, nausea, change in appetite, headache, sleep disturbance, agitation, dermatological symptoms, eye function disturbance, various gastrointestinal symptoms and autonomic manifestations. Incidence of sedation and unsteadiness increased with age. Small decreases in blood pressure have been noted but are not clinically significant, probably being related to relief of anxiety.

Overdosage: In management of overdosage with any drug, bear in mind multiple agents may have been taken. Manifestations of overdosage include somnolence, confusion and coma. Induce vomiting and/or undertake gastric lavage followed by general supportive care, monitoring vital signs and close observation. Hypotension, though unlikely, usually may be controlled with Levarterenol Bitartrate Injection U.S.P. Usefulness of dialysis has not been determined.

Ativan® (IV)
for (lorazepam)
Anxiety

DOSAGE: Individualize for maximum beneficial effects. Increase dose gradually when needed, giving higher evening dose before increasing daytime doses. Anxiety, usually 2-3mg/day given b.i.d. or t.i.d.; dosage may vary from 1 to 10mg/day in divided doses. For elderly or debilitated, initially 1-2mg/day; Insomnia due to anxiety or transient situational stress, 2-4mg h.s.

HOW SUPPLIED: 0.5, 1.0 and 2.0mg tablets.

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Highlights of "The Turning Point"

One hundred sixty physicians, their spouses and others interested in the future of medical care in this country attended "The Turning Point" conference March 16 and 17.

The sponsors of this program were the Kentucky Medical Association and the Kentucky Peer Review Organization. The speakers were physicians, economists, attorneys and others who are leaders in predicting and shaping the future of medical care.

The Grand Ballroom of the Seelbach Hotel was the setting for the two-day program, highlighted by a dinner featuring syndicated columnist Robert Novak as guest speaker. In his presentation, Novak commented on the recent changes in the political climate from growing discontentment with the pervasiveness of big government.

This subject was touched on again in the presentation by Edward R. Annis, M.D., Past President of the AMA. The intrusion of government into medical care has added to the increase in medical costs, according to Doctor Annis. He says, "We have lived through two decades of government regulatory attempts to control and direct how medicine is to be practiced. One after another of these often expensive, less often successful efforts, of nonmedical, nonscientific, politically motivated representatives of the public have assumed the forms of medical review, Medicare, Medicaid, government financed HMO's, etc. These efforts are now recognized as having been wasteful and nonproductive."



Dwight L. Blackburn, M.D., (left) KMA President and Robert D. Novak, Washington Columnist



Dwight L. Blackburn, M.D.
KMA President

John Elkins, trend analyst for the Naisbitt Group, spoke on the decentralization of government in his presentation titled "The Future is Now—There Is No Status Quo." He pointed out that there is a transition going on in the economy. "We don't know how to measure things anymore . . . If you look at what's going on state by state, county by county, local government by local government, we don't have a national economy. What we do have is a developing set of regional economics." He went on to explain, "We're starting to focus on a series of social, economic and political relationships that are going to be very different whether you're in hospitals, doctors' offices or whatever."

Cassette Tapes of each presentation are available from Convention Record, 809 Glenbarr Place, Louisville, KY 40243.



Russell W. H. Kridel, M.D., Houston, Texas



Chris M. LeMay, Louisville
Investment Broker



Edward R. Annis, M.D., Miami, Florida



Connie S. Henderson, Chicago, Illinois, AMA, Program Dir., Dept. of Practice Management

"Inflation and regulations taken together contribute roughly 75% to increased health cost, factors which neither doctors nor hospitals have any control."

Edward R. Annis



Paul J. Feldstein, Ph.D., Professor, University of Michigan (left) with James B. Holloway, M.D., KMA, President-Elect



John Elkins, Denver, Colorado, Trend Analyst, The Naisbitt Group

RU-TUSS® TABLETS

For Less Sneez'n This Season



• antihistaminic • nasal decongestant • anti-secretory • convenient b.i.d. dosage

Prompt, effective Ru-Tuss® tablets bring welcome relief to the patient with allergic rhinitis. Ru-Tuss® tablets ease congestion, relieve respiratory tract irritation and reduce the need to sneeze. Convenient b.i.d. dosage provides a full day's therapy.

Each prolonged action tablet contains: Phenylephrine Hydrochloride 25 mg • Phenylpropanolamine Hydrochloride 50 mg • Chlorpheniramine Maleate 8 mg • Hyoscyamine Sulfate 0.19 mg • Atropine Sulfate 0.04 mg • Scopolamine Hydrobromide 0.01 mg • Each Ru-Tuss tablet acts continuously for 10 to 12 hours.

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Please see brief summary of prescribing information on the next page.

Brief Summary of prescribing information

RU-TUSS®

TABLETS

INDICATIONS AND USAGE: Ru-Tuss Tablets provide relief of the symptoms resulting from irritation of sinus, nasal and upper respiratory tract tissues.

CONTRAINDICATIONS: Hypersensitivity to antihistamines or sympathomimetics. Ru-Tuss Tablets are contraindicated in children under 12 years of age and in patients with glaucoma, bronchial asthma and women who are pregnant. Concomitant use of MAO inhibitors is contraindicated.

WARNINGS: Ru-Tuss Tablets may cause drowsiness. Patients should be warned of possible additive effects caused by taking antihistamines with alcohol, hypnotics, sedatives or tranquilizers.

PRECAUTIONS: Ru-Tuss Tablets contain belladonna alkaloids, and must be administered with care to those patients with urinary bladder neck obstruction. Caution should be exercised when Ru-Tuss Tablets are given to patients with hypertension, cardiac or peripheral vascular disease or hyperthyroidism. Patients should avoid driving a motor vehicle or operating dangerous machinery (See WARNINGS:).

OVERDOSAGE: Since the action of sustained release products may continue for as long as 12 hours, treatment of overdoses directed at reversing the effects of the drug and supporting the patient should be maintained for at least that length of time. Saline cathartics are useful for hastening evacuation of unreleased medication. In children and infants, antihistamine overdosage may produce convulsions and death.

ADVERSE REACTIONS: Hypersensitivity reactions such as rash, urticaria, leukopenia agranulocytosis, and thrombocytopenia may occur. Other adverse reactions to Ru-Tuss Tablets may be drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension/hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerostomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, dizziness and insomnia. Large overdoses may cause tachypnea, delirium, fever, stupor, coma and respiratory failure.

DOSAGE AND ADMINISTRATION: Adults and children over 12 years of age, one tablet morning and evening. Not recommended for children under 12 years of age. Tablets are to be swallowed whole.

Federal law prohibits dispensing without prescription.

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Watch for the 1983 KMA Membership Roster to be published in the July *Journal of the Kentucky Medical Association*

Highlights of KMA Board Meeting

The KMA Board of Trustees met April 13 and 14 to hear reports and approve items from a lengthy agenda. A summary of the minutes is on page 399.

In the President's report, Doctor Blackburn addressed the issue of health care for the poor and the unemployed and the following statement was adopted by the Board of Trustees.

"In the time honored tradition of the medical profession, members of the Kentucky Medical Association have rendered medical care to patients regardless of their economic status or ability to pay.

The KMA Board of Trustees, recognizing the serious difficulties of the poor and unemployed, urges KMA's members to become acutely aware of the economic conditions of their patients. Many individuals are temporarily out of work and are delaying medical care. In keeping with past policies of the KMA House of Delegates, the Board of Trustees reaffirms to its membership that emergency or necessary medical care should be provided regardless of ability to pay.

Members of the Kentucky Medical Association are urged to adhere to traditional policies of adjusting fees and offering deferred financial arrangements for those who are temporarily unable to afford medical care.

Additionally, KMA urges its members to continue communicating with their patients, expressing concern regarding any hardships they may be having and inviting their patients to continue seeking medical care for themselves and their families."

A proposed letter which physicians may send to their patients and which embraces this statement can be found on page 401.

The new Kentucky Medical Insurance Agency building addition at the KMA Headquarters Office is expected to be completed by July of this year. Secretary-Treasurer, S. Randolph Scheen, M.D., made this announcement in his Headquarters Office report.

The 10,000 sq. ft. addition will house the Licensure Board staff, KMIC and KMIA staff, some KMA employees and the newly formed Kentucky Physicians Financial Services, Inc., A Federal Credit Union. Doctor Scheen introduced the new General Manager and CEO of the Credit Union, Charles D. Crabtree. He formerly headed one of the largest, most successful credit unions in Kentucky.



Dwight L. Blackburn, M.D.
KMA President

Mr. Crabtree reported that the Credit Union opened its books for business on March 28 and on March 31 more than $430,000 had been deposited. The Credit Union will become a full service primary financial institution offering checking accounts, credit cards, IRA's, certificates of deposit, savings accounts and loans.



S. Randolph Scheen, M.D.
KMA Secretary-Treasurer



Charles D. Crabtree
General Manager—Kentucky Physicians Financial Services, Inc., A Federal Credit Union

He noted that the institution's earnings, after reserves, will be returned to members as dividends.

In other matters, the Board appointed Walter I. Hume, Jr., M.D. as the official KMA representative to the Kentucky Health Care Coalition. The Coalition is an offshoot of the Governor's Coalition of Payors to address Health Care Costs. Doctor Hume is one of eight providers being added to that group's governing body.

At the recommendation of the Hospital Committee the Board determined that it is appropriate for KMA to suggest that high risk health care personnel be vaccinated against Hepatitis-B; that the issue of informed consent for such vaccinations be dealt with by the respective hospital involved and that the question of who pays the cost of the vaccination is also one which should be resolved at a local level.

The Board also accepted a recommendation related to recently proposed revisions in the medical staff chapter of the JCAH's *Accreditation Manual for Hospitals*. Here the Board called for opposition to that part of the proposed revision which would alter that section currently relating to "medical staff" and make it one which instead relates to "organized staff." For recent developments relating to this matter, please see page 400.

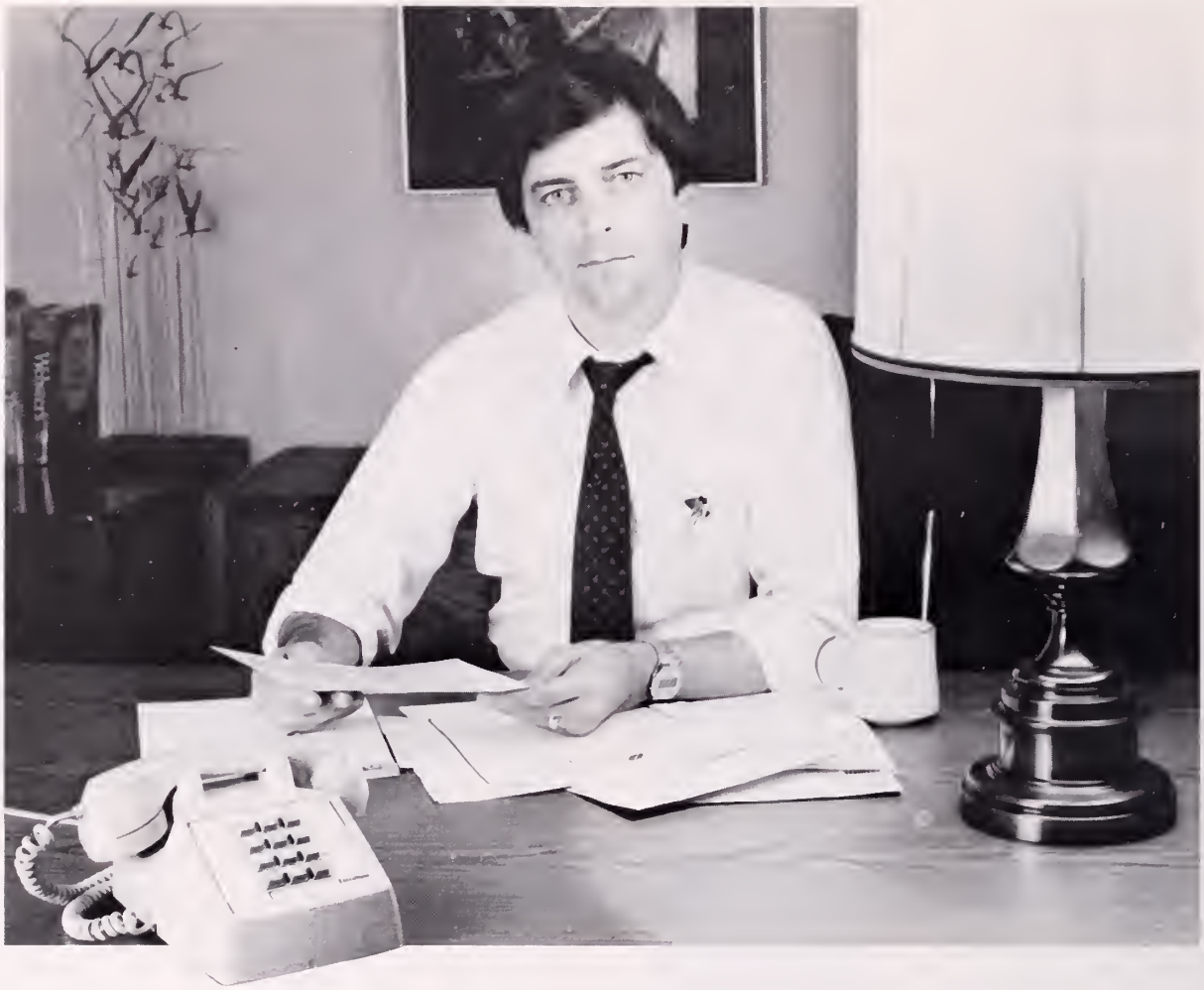
Additionally, the Board appointed an ad hoc committee on computer services to study the feasibility of the KMA forming a computer services company to assist physicians with their office automation. The committee will determine if there is a sufficient market for the company to provide services including consultation, training, discount hardware and software prices and maintenance.

The next meeting of the KMA Board of Trustees is scheduled for August 10 and 11, 1983.

Peter C. Campbell, M.D., Louisville, assumed the office of Speaker of the KMA House of Delegates on April 14, 1983, following the resignation of Bennett L. Crowder, M.D. Doctor Campbell has served as Vice Speaker since 1980 and served as President of the Jefferson County Medical Society in 1982-83.

In accordance with KMA Constitution and Bylaw provisions, the Board of Trustees elected Thomas L. Heavern, M.D., Highland Heights, to complete the remaining term of Vice Speaker Campbell.

Elections will be held at the 1983 Annual Meeting of the House of Delegates in September for both the positions of Speaker and Vice Speaker of the House of Delegates.



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Digest of Proceedings Meeting of the KMA Board of Trustees April 13-14, 1983

The KMA Board of Trustees met in regular session at the KMA Headquarters Office on April 13-14, 1983. The Board accepted reports of the President; Auxiliary President; Secretary-Treasurer; Secretary, State Board of Medical Licensure; Senior Delegate to AMA; KPRO President; and Commissioner for Health Services.

The Board approved the proposed Budget for the 1982-83 fiscal year, and asked the Committee on Constitution and Bylaws to propose a Bylaw change elevating annual dues for regular active members.

The Board empowered the Executive Committee to formulate a document in answer to Governor Brown's proposals for health care cost containment in Kentucky; and to set up a KMA computer services company if results of a market survey are positive.

Also approved was a stock exchange between the KMA Insurance Agency, Inc. and KMA Physicians Services, Inc. (a holding company), which would effect KMA ownership of the holding company, which in turn would own the Agency.

The Board also approved loans to KMA Physicians Financial Services, Inc., A Federal Credit Union, for up to two years, to be shared by the Kentucky Medical Insurance Company and the KMA Insurance Agency, Inc.

In other action, the Committee on Medical Insurance and Prepayment Plans was charged with monitoring a pilot pre-authorization program that Blue Cross and Blue Shield has instituted on a limited basis; and adopted recommendations of the Hospital Committee regarding JCAH Proposals on Medical Staffs and Hepatitis B Vaccinations. The Committee on Impaired Physicians was granted authority to seek assistance from KMA members not serving on the Committee who may be instrumental in carrying out the Committee's functions.

The Board endorsed the Executive Committee's appointment of J. Campbell Cantrill, M.D., Georgetown, to the Judicial Council to fill an unexpired term; and appointed Thomas L. Heavern, Jr., M.D., Highland Heights, as Vice Speaker, House of Delegates, to fill the unexpired term of Peter C. Campbell, M.D., Louisville, who was elevated to Speaker following the resignation of Bennett L. Crowder, M.D. from that position.

Walter I. Hume, Jr., M.D., Louisville, was appointed as KMA's representative on the Kentucky Health Costs Coalition; funds were allocated for dues on the Coalition; and authorization for payment of expenses was given for KMA sponsorship of a speaker on a symposium the Coalition is planning.

The Board authorized expenses for a member of the Committee on School Health to attend an AMA meeting regarding the National Committee on the Child, and scheduled a Practice Management Workshop on "Marketing Strategies for Private Practice" on November 10, 1983, in Owensboro.

The next meeting of the KMA Board was called for August 10-11, 1983.

NEWS

The KMA Board of Trustees has appointed an Ad Hoc Committee on Computer Services to study the feasibility of the Association forming a computer services company to assist physicians with their office automation. The Ad Hoc Committee will shortly be forwarding the Membership a survey form which they would appreciate you completing and returning. A spot survey has already been conducted which indicated extreme interest in the company concept. The Ad Hoc Committee wants to determine if there is a sufficient market for the company to provide services which would include consulting, training, discounted hardware and software prices and maintenance service on all items. For additional information concerning this subject contact the KMA Headquarters Office.

MEDI-SHARE is a new program designed by Jefferson County Medical Society to ensure medical care for patients who cannot pay because they have lost their jobs and their medical insurance. More than 250 physicians have already volunteered to participate. Eligible persons must (1) live in Jefferson County; (2) have become unemployed since December 31, 1981; (3) be unemployed now; (4) have no health insurance coverage or public medical assistance, such as Medicare and Medicaid. Jefferson County Medi-Share is a temporary program and will be reviewed every six months.

The KMA Board of Trustees recently adopted two recommendations made by the Hospital Committee and referred to it after prior review by the Executive Committee. The Board determined that it is appropriate for KMA to suggest that high risk health care personnel be vaccinated against Hepatitis-B; that the issue of informed consent for such vaccinations be dealt with by the respective hospitals involved; and, that the question of who pays the cost of the vaccination is also one which should be resolved at a local level.

The Board also accepted a recommendation related to recently proposed revisions in the Medical Staff Chapter of the JCAH's *Accreditation Manual for Hospitals*. Here the Board called for opposition to that portion of the proposed revision which would alter that section currently relating to "medical staff" and make it one which instead relates to "organized staff."

(For recent developments relating to this matter, please read the following update forwarded by the AMA.)

In response to the reaction from AMA membership over proposed revisions in the Medical Staff chapter of the Joint Commission on Accreditation of Hospitals' *Accreditation Manual for Hospitals*, the AMA Board of Trustees, on April 8, confirmed a March 22 action of the AMA Commissioners to the JCAH. The action outlined a set of principles for inclusion in future drafts of the Medical Staff chapter. The principles are:

- Continue the use of the term "Medical Staff" in the title of the chapter and throughout the manual;
- Delete references to dentists, podiatrists, oral surgeons, and other limited licensed practitioners in the Medical Staff chapter;
- Ensure access for limited licensed practitioners;
- Require greater than a majority of fully licensed physician membership on the Medical Staff executive committee in acute care general hospitals;
- Provide for exceptions to the above requirement in other hospitals; and
- Ensure that all hospitalized patients receive the same standard of care through appropriate language relating to admissions and the responsibility for the medical care of patients.

At its March 27 meeting, the JCAH Standards and Survey Procedures Committee instructed JCAH staff, with professional assistance, to draft standards language implementing principles similar to those approved by the AMA Board of Trustees.

The AMA Board had previously requested the JCAH Board of Commissioners to defer final action on any revisions in the Medical Staff chapter until its August meeting, to allow for full consideration of the issue by the AMA constituency.

The new draft, requested by the Standards and Survey Procedures Committee, will be reviewed at its next meeting in late July. No final action on the Medical Staff standards is expected before the August meeting of the JCAH Board of Commissioners.

Medical Care for the Unemployed and Poor

On April 13, 1983, the Kentucky Medical Association Board of Trustees adopted the following statement. A sample letter is also included for your consideration. Many members have previously observed this policy and are to be congratulated for their concern with regard to the unemployed. Through a deep personal and professional interest in our patients and their family's health and welfare, medicine can survive and build upon the goodwill and service it provides in difficult times like these.

Dwight L. Blackburn, M.D.
President of KMA

Board of Trustees Statement Adopted April 13, 1983

In the time honored tradition of the medical profession, members of the Kentucky Medical Association have rendered medical care to patients regardless of their economic status or ability to pay.

The KMA Board of Trustees, recognizing the serious difficulties of the poor and unemployed, urges KMA's members to become acutely aware of the economic conditions of their patients. Many individuals are temporarily out of work and are delaying medical care. In keeping with past policies of the KMA House of Delegates, the Board of Trustees reaffirms to its membership that emergency or necessary medical care should be provided regardless of ability to pay.

Members of the Kentucky Medical Association are urged to adhere to traditional policies of adjusting fees and offering deferred financial arrangements for those who are temporarily unable to afford medical care.

Additionally, KMA urges its members to continue communicating with their patients, expressing concern regarding any hardships they may be having and inviting their patients to continue seeking medical care for themselves and their families.

Sample Letter

Dear Patient:

Many citizens in our community are experiencing economic difficulties during this time of high unemployment. While I have no way of ascertaining any individual difficulties you may be having at this particular time, let me express to you my personal concern. While several patients have privately discussed this matter with me, others have been reluctant to do so.

Let me assure those who are temporarily undergoing personal family hardships that these matters will be handled in a confidential case by case manner that accompanies our usual physician-patient relationship.

My greatest concern is that some patients are delaying necessary and on-going medical care as a result of financial problems. I wish to reaffirm my intention to continue rendering medical care to you and members of your family, despite any hardships or inability you may have at the present time to pay for services.

Our relationship must continue to be based upon mutual concern and trust. If I or members of my staff can assist you or if you wish to discuss these matters, please let us know.

In Memoriam

GEORGE F. BROCKMAN, III, M.D.
Greenville
1912-1983

George F. Brockman, III, M.D., president of the Kentucky Medical Association in 1967-1968 died April 2 at Muhlenberg Community Hospital. He was 71. Doctor Brockman graduated in 1935 from the University of Louisville School of Medicine specializing in internal medicine. He had been a member of the KMA since 1952 serving on the Board of Trustees, the Building Committee, the Advisory Committee to the Editor, the Infant and Maternal Mortality Committee, the Orientation Committee and vice chairman of the Council on Scientific Assembly.

JOHN HENRY WALLS, M.D.
Louisville
1889-1983

John Harrison Walls, M.D., a retired Louisville physician, died at Jewish Hospital, March 29, 1983. He was 93-years-old. Doctor Walls was a 1917 graduate of Meharry Medical College in Nashville, Tennessee and established his practice in Louisville in 1918. Doctor Walls had been a member of the KMA since 1954.

LAWRENCE E. HURT, M.D.
Lexington
1907-1983

Lawrence E. Hurt, M.D., a retired Lexington surgeon, died March 11, 1983. He had been retired since 1973. Doctor Hurt received his medical degree from the University of Louisville School of Medicine in 1935 and had been a member of the KMA since 1952.

W. FIELDING RUBEL, M.D.
Louisville
1924-1983

W. Fielding Rubel, M.D., a retired surgeon and chairman of the board of NKC, Inc., died April 17, 1983. Doctor Rubel was a leader of the team that performed the first open-heart surgery in Kentucky in 1958. He was a 1949 graduate of the University of Louisville and practiced thoracic surgery until his retirement in 1975. A member of the KMA since 1954, Doctor Rubel had served on the Emergency Medical Services Committee and the Committee on Disaster Medical Care.

MARION F. BEARD, M.D.
Louisville
1905-1983

Marion F. Beard, M.D., an internationally known hematologist, died March 18, 1983, in Venice, Florida. He was founder and former medical director of the Red Cross Regional Blood Center, and former associate professor of medicine at the University of Louisville School of Medicine and chief of its hematology department. Doctor Beard received his medical degree in 1930 from the University of Louisville School of Medicine, and was a Fellow of American College of Physicians, a member of the American Society of Hematology, American Federation of Clinical Research, American Men of Science, AMA, and the Jefferson County Medical Society. He had been a member of the Kentucky Medical Association since 1952 and had served on the Council on Allied Professions and Related Groups Blood Banks Committee.

GODFREY G. MAIER, M.D.
Louisville
1926-1983

G. George Maier, M.D., died April 3, 1983 at Jewish Hospital. He was a 1950 graduate of the University of Louisville School of Medicine and was an eye, ear, nose and throat specialist. Doctor Maier was a member of the American Academy of Otolaryngology, the Jefferson County Medical Society and had been a member of KMA since 1955.

ROGER D. AKERS, M.D.
Hindman
1945-1983

Roger D. Akers, M.D., a family practitioner from Floyd County died April 10, 1983. Doctor Akers was a 1972 graduate of the University of Kentucky Medical School. He was a member of the Kentucky Academy of Family Physicians, the American Medical Association, and had been a member of the KMA since 1974 serving as a trustee since January 1982.

RICHARD O'CONNELL, M.D.
Brandenburg
1926-1983

Richard O'Connell, M.D., Meade County Coroner, died April 26, 1983. He was a 1951 graduate of the Columbia Medical School and had become a member of KMA in 1981.

Postgraduate Page

JUNE

2-3 Genetic Aspects of Common Genetic and Malformation Disorders, Hyatt Regency Hotel, Lexington

2-4 1st Symposium on Behavioral Neurology: Higher Cortical Functions and the Brain, Vanderbilt University School of Medicine, Nashville, TN

8-10 12th Update in OB-GYN, Hyatt Regency Hotel, Lexington

8-10 Eighth Annual Conference on Clinical Application of Hyperbaric Oxygen, Memorial Hospital Medical Center, Center for Health education, Long Beach, California

9-10 Southern Medical Association, Medical Malpractice Seminar, Houston, Texas

16-17 Southern Medical Association, Medical Staff Leadership Seminar, Kansas City, Missouri

17 Problem Solving in Cardiovascular Disease for the Primary Care Physician, University of Louisville, Health Sciences Center

19-20 Long Island Jewish-Hillside Medical Center, VASCULAR SURGERY 1983, Current Status of the Art (International Vascular Symposium), The New York Hilton at Rockefeller Center, New York, NY

JULY

19-23 Vanderbilt University, Sixth Annual Symposium on Contemporary Clinical Neurology, Hilton Head Island, SC

AUGUST

5-6 Bethesda Hospital and Deaconess Association, Second Annual Hands-On Anterior/Posterior Vitrectomy Workshop, The Terrace Hilton Hotel, Cincinnati, OH

17-21 American Professional Practice Association, Timely Economic & Tax Savings Seminar for Doctors, Walt Disney World, Florida

19-21 Southern Medical Association, Regional Postgraduate Conferences, San Antonio, Texas

26-28 Southern Medical Association, Medical Malpractice Seminar, Hot Springs, Virginia

SEPTEMBER

7-10 13th Annual Peripheral Vascular Disease Symposium, University Hilton Inn, Columbus, OH

19-22 KMA Annual Meeting, Ramada Inn/Bluegrass Convention Center, Louisville

OCTOBER

8-16 Eighth Annual International Body Imaging Conference, Maui Surf Hotel, Maui, Hawaii

13-14 Southern Medical Association, Medical Malpractice Seminar, Washington, D.C.

NOVEMBER

4-5 Bethesda Hospital and Deaconess Association, Cincinnati Cancer Conference: G. I. Malignancies, The Westin Hotel, Cincinnati, OH

6-9 Southern Medical Association, Regional Postgraduate Conferences, Baltimore, Maryland

6-9 Southern Medical Association, Annual Scientific Assembly, Baltimore, Maryland

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W. Allen Rader, M.D.
Randall Willis, M.D.

Boone

Philip Golder, M.D.
Michael J. Grogan, M.D.

Boyd

Mark G. Haeberle, M.D.

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William M. Tuttle, M.D.

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Barbara Phillips, M.D.
Daniel B. Pope, Jr., M.D.
Dorothy J. Thompson, M.D.
Janivara P. Umesh, M.D.
Catherine A. Weed, M.D.
Joseph L. Zerga, III, M.D.

Floyd

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Ladonna Sharon Smith, M.D.
Gilbert E. Woodall, Jr., M.D.
Mark J. Yurchisin, M.D.

Washington
Brian F. Wells, M.D.

Woodford
James P. Roach, M.D.

HONORS

Hiram C. Polk Jr., M.D., chairman and professor of the University of Louisville School of Medicine's Department of Surgery, was recently elected by the national Residency Review Committee to serve as its chairman for two years. The Residency Review Committee is responsible for the accreditation of all postgraduate education in surgery, including more than 300 residency programs nationwide, and encompasses more than 8,000 young surgeons in training. The Committee members are chosen from representatives of the American College of Surgeons, the American Board of Surgery and the American Medical Association.

Doctor Polk has been chairman of the U of L surgery department since 1971 and is well known for his contributions to surgical education and numerous areas of clinical care. He has been president of the Association of Academic Surgery, the Society of University Surgeons and is president-elect of the Society of Surgical Oncology.

Norman M. Cole, M.D., Louisville, was reelected secretary of The American Society for Aesthetic Plastic Surgery at their 16th annual meeting. Doctor Cole received his medical degree from Loma Linda California Hospital and had residency in plastic surgery at Duke University.

Jesse B. Bell, M.D., a retired Louisville physician, received the American Heart Association's Louis B. Russell Jr. Memorial Award for outstanding service. Doctor Bell began the first program in Kentucky to screen minorities and low-income residents for high blood pressure, and he helped to develop Stroke Clubs in the state.

"Human Sexuality" is Theme for 1983 KMA Annual Meeting

Plans are being finalized for the 1983 KMA Annual Meeting, September 19-22, at the Ramada Inn Bluegrass Convention Center, Louisville.

"Human Sexuality" is the theme this year and nationally recognized speakers will offer topics on a variety of related subjects.

Robert S. Eliot, M.D., Omaha, Nebraska, KMA's guest scientific speaker, will present two sessions on stress during Wednesday afternoon's session. "Detecting Cardiovascular Stress" will cover lifestyle, behavior and stress and how they interact with the central nervous system to bring about changes that can lead to cardiovascular disorders.

Doctor Eliot, Professor of Medicine at the University of Nebraska, will also speak on the topic "Management of Stress After Myocardial Infarction," his second presentation on Wednesday afternoon.

A summary of his presentation explains the "standard" risk factors that are implicated in about 50% of new cases of cardiovascular disease. In the management of stress after myocardial infarction it is important to determine antecedent stress factors; identify realistic goals; learn good communication skills; modify potentially self-destructive behavior and reduce the frequency and number of disruptive life changes.

Other activities during the KMA Annual Meeting include 21 specialty group meetings and KMA House of Delegates meetings on September 19th and 21st and the President's Luncheon on September 21st.

EDWARD R. ANNIS, M.D., past president of the American Medical Association will be the featured speaker at the President's Luncheon. Doctor Annis recently participated in "The Turning Point" Conference and highlighted medicine's obligation to defend the greatest health care system in the world.

". . . why is 9½% or 10% for total health care to be decried yet 17½% on sports and recreation and 20% of the GNP on transportation of people and things totally acceptable?"

"Money spent on health care is not money lost, money wasted, or money down the drain. On the contrary, health care workers are tremendous contributors to a steady economy."

"Comparing medicine today with even 25 years ago would be like comparing a 747 with the plane that the Wright brothers flew in Dayton."

Perhaps no spokesman in America today can more dynamically and effectively tell America's health success story. Make plans now to attend and hear Edward R. Annis, M.D.

Details and program of the Annual Meeting will be published in the August issue of the *Journal.*



Edward R. Annis, M.D.



Robert S. Eliot, M.D.

Nominations Being Accepted for Three Annual KMA Awards

Nominations are being accepted for three awards which are presented each year at the KMA Annual Meeting to outstanding physicians and lay people.

Nominees for the Educational Achievement Award are chosen from members of the Commonwealth who have made a significant achievement in medical or medically related education in areas of research, clinical application of medical practice and/or patient education. Nominations must be received in the Headquarters Office by July 1. Recipients are chosen by the Continuing Medical Education Committee.

The Distinguished Service Award is presented each year to a physician in the state who has contributed to organized medicine or individual medical service, community health or civic betterment and medical research or distinguished voluntary military service. The nominee may qualify on any one or a combination of these points.

The Kentucky Medical Association Award is presented to an outstanding lay person in honor of his or her outstanding accomplishments in the field of public health and/or medical care. July 15 is the deadline for receiving nominations for the Distinguished Service Award and the Kentucky Medical Association Award. Recipients will be chosen by the Awards Committee.

Nominee material should include background and historical information about the nominee as well as justification for the nomination.



1983 KMA ANNUAL MEETING

September 20, 21 & 22

Ramada Inn/Bluegrass Convention Center
Louisville, Kentucky



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MEDICAL OPPORTUNITIES

BEREA, KY, Opening July 1, 1983 for full-time radiologist, Berea Hospital Inc., P.O. Box 128, Berea 40403. Phone (606) 986-3151. Contact David E. Burgio, administrator or Dwight L. Blackburn, M.D., Chief of Staff.

PEDIATRICIAN wanted for associate. Established pediatric practice with office space available 1000 yards from 200 bed hospital. Salary and benefits negotiable. Call Leticia Bravo, M.D., area code 502-651-9755 day or 502-678-1407 night.

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BEREA, KY, Opening July 1, 1983 for full-time orthopedic surgeon, Berea Hospital, Inc., P. O. Box 128, Berea 40403. Phone (606) 986-3151. Contact David E. Burgio, Administrator or Dwight L. Blackburn, M.D., Chief of Staff.

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- Contraindicated in patients who are pregnant or hypersensitive to flurazepam.
- Caution patients about drinking alcohol, driving or operating hazardous machinery during therapy.



References: 1. Kales A *et al: J Clin Pharmacol 17*:207-213, Apr 1977 and data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Kales A: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **4.** Kales A *et al: JAMA 241*:1692-1695, Apr 20, 1979. **5.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 15, 1978. **6.** Kales A *et al: Clin Pharmacol Ther 19*:576-583, May 1976. **7.** Kales A, Kales JD: *Pharmacol Physicians 4*:1-6, Sep 1970. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Dement WC *et al: Behav Med 5*:25-31, Oct 1978. **10.** Vogel GW: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **11.** Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington, DC, May 3-7, 1971. **12.** Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytime sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. **13.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

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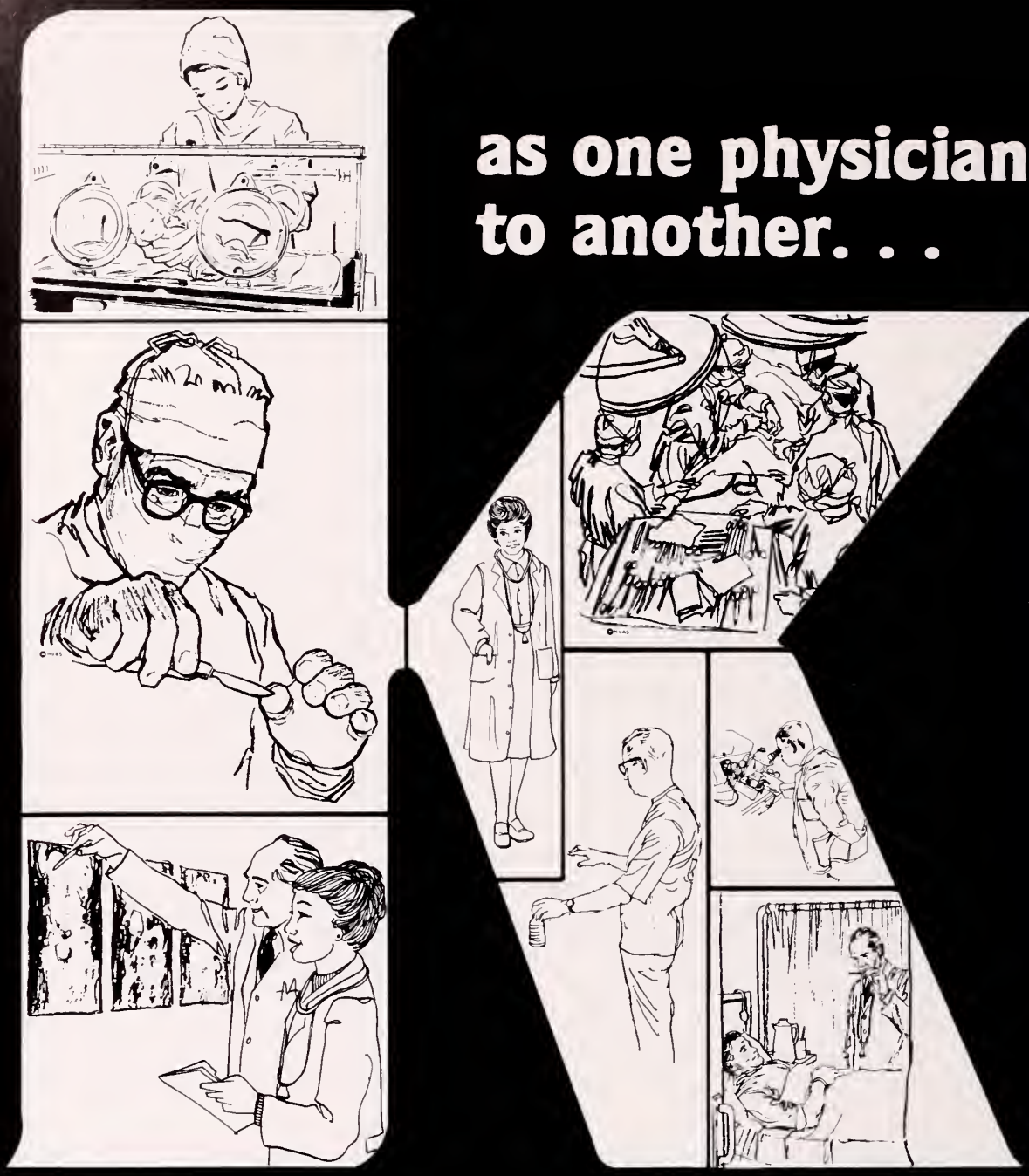
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PRESIDENT'S PAGE



Richard F. Hench, M.D.

As I think back over my last 15 years of involvement with the Kentucky Medical Association (KMA) and try to look into the immediate future, a very disturbing feeling occurs to me. This feeling is one of apprehension about the gathering forces bearing on medical care which I believe will generate tremendous conflict and friction within our profession. My great concern is that these internal forces will cripple the ability of organized medicine to function effectively at the local and national level and thus remove one of our best, and maybe our last, best, hope for survival of our profession as we now know it.

These gathering clouds of unpredictable force and direction include government health plans to control health costs, Health Maintenance Organizations (HMO's), Preferred Provider Organizations (PPO's), Independent Practice Associations (IPA's), nurse practitioners, closed or semi-closed groups of doctors organized by for-profit hospitals, physician's assistants, and other unforseen forces.

It is my great fear that these forces, coupled with the real or imagined excess of physicians, will drive physicians into a "bunker mentality" in which we each dig into our little piece of ground and lose sight of what is best for medicine as a whole. There is certainly nothing wrong with the individual looking out for his own good, but if we are to preserve what is best and noblest in our profession we must also remain dedicated to what is best for our entire profession and the patients we serve.

I must admit that of all the above mentioned forces, the one that appears to me to be especially threatening is the large for-profit hospitals developing closed panels of doctors to support their hospitals. I believe that the talent, money, and promotional abilities of these hospitals with their appeal to large companies and large groups of patients could be very destructive to the freedom of choice which I believe to be basic to good medical care.

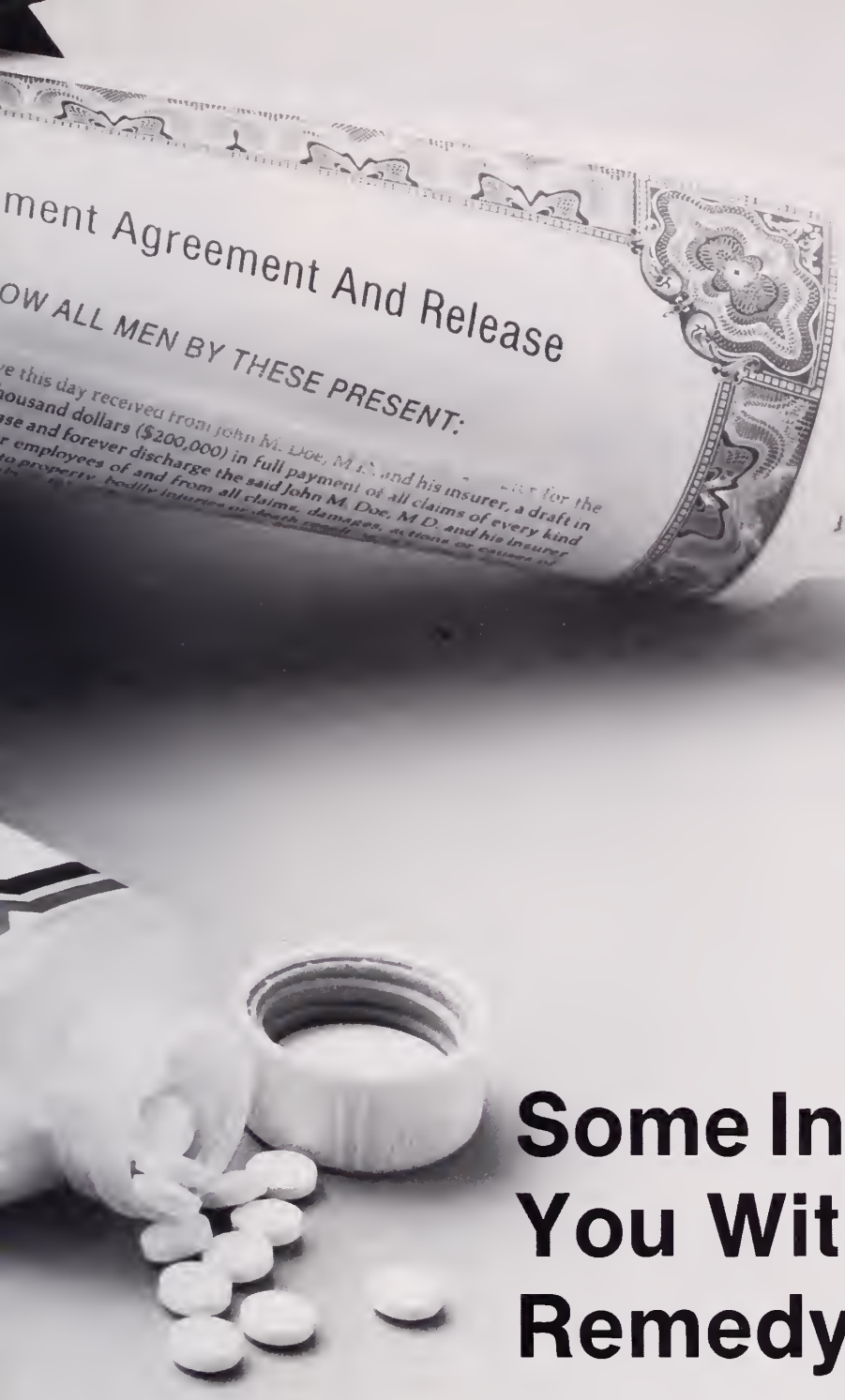
These new forces will not only cause disruption within our profession, but undoubtably will cause increased problems between physicians and hospitals, and between physicians and third party payers. The diagnostic related groups (DRG's) method of hospital reimbursement could not be more expertly designed to cause great friction among physicians, hospital administration, and third party payers. An even more ominous effect of the DRG's is the potential clash it may cause between the above three groups and the patients and their families.

The hospitals and third party payers have not always responded in ways we physicians think they should. However, I believe that in the final analysis, we are all three sailing on the same ship and any grief to one will be grief to us all.

Unfortunately, many if not most of the big medical decisions in the foreseeable future will be made in Frankfort and in Washington. Kentucky medicine must have a strong, unified voice in these decisions. As each of us decides what is good for ourselves, our specialty, our groups, or our hospital, we must also remember what is good for medicine and for our patients.

Richard F. Hench, M.D.
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Syndrome of the Sea-Blue Histiocyte

M. ERNEST MARSHALL, M.S., M.D. AND STEPHANIE T. HATFIELD, M.D.

A 28-year-old male was evaluated for splenomegaly. Lymphangiogram showed mild adenopathy with changes suggestive of Hodgkin's disease or lymphoma. Laparotomy with splenectomy was performed. Pathologic evaluation of the spleen resulted in the diagnosis of the syndrome of the sea-blue histiocyte. The history and nature of this rare syndrome are discussed.

IN 1954, Sawitsky *et al*[1] described two patients who displayed splenomegaly and a morphologically distinct histiocyte containing blue granules (by Wright's or Giemsa stain). This finding was rare and by 1970 only nine cases had been reported. While the clinical spectrum of the disease was variable the distinct morphologic features of the histiocyte prompted Silverstein *et al*[2] to coin the term "Syndrome of the Sea-Blue Histiocyte" to encompass these cases.

The purpose of this report is to add another case of this rare syndrome to the literature and to review our current knowledge of the "sea-blue" histiocyte.

Case Report

A 28-year-old white male was admitted to the hospital for evaluation of a one year history of general malaise, easy fatigability, increasing irritability and left upper quadrant abdominal discomfort. An upper gastrointestinal radiographic series was normal except for the incidental finding of splenomegaly. Physical examination was completely normal. Splenomegaly was not detectable by examination because of marked obesity. Barium enema, intravenous pyelogram, chest radiograph, electrocardiogram, leukocyte count, hemoglobin, hematocrit, platelet count, serum electrolytes and enzymes, urinalysis, VDRL, prothrombin time, partial thromboplastin time and lipid profile were all normal. Radionuclide liver-spleen scan revealed marked splenomegaly. Computerized tomographic scan of the abdomen was normal except for the demonstration of splenomegaly. Posterior iliac crest bone marrow aspirate and biopsy revealed a normal bone marrow. A bipedal lymphangiogram showed slightly enlarged lymph nodes with displacement of contrast material suggesting the possibility of Hodgkin's disease or a non-Hodgkin's lymphoma.

A staging laparotomy was done with the presumptive diagnosis of probable Hodgkin's disease. Splenectomy, liver biopsy and lymphadenectomy were performed. The post-operative course was uneventful and the patient is currently alive, well and asymptomatic with normal physical examination and laboratory studies.

Pathology

The spleen weighed 985 grams. Microscopic examination revealed numerous large histiocytes in the red pulp. The cytoplasm of these cells was vesicular and ranged from pale gray to amber-brown depending upon the amount of intracytoplasmic pigment. This material stained positively with Oil Red O (Figure 1). It was intensely stained with PAS and was diastase-resistant (Figure 2). The material also stained acid-fast (Figure 3). A Wright-Giemsa stained touch preparation revealed the 'sea-blue' nature of these histiocytes (Figure 4). The cells did not stain for iron.

Histologic examination of the liver revealed mild fatty infiltration and the lymph nodes revealed only lipoid granulomas.

Discussion

The earliest recorded case of splenomegaly and sea-blue histiocytes was that of Wewalka[3] in 1950. He described a 27-year-old man with splenomegaly and "blaue pigmentmakrophagen" in the bone marrow. In 1954, Sawitsky *et al.*[1] reported two patients with hep-

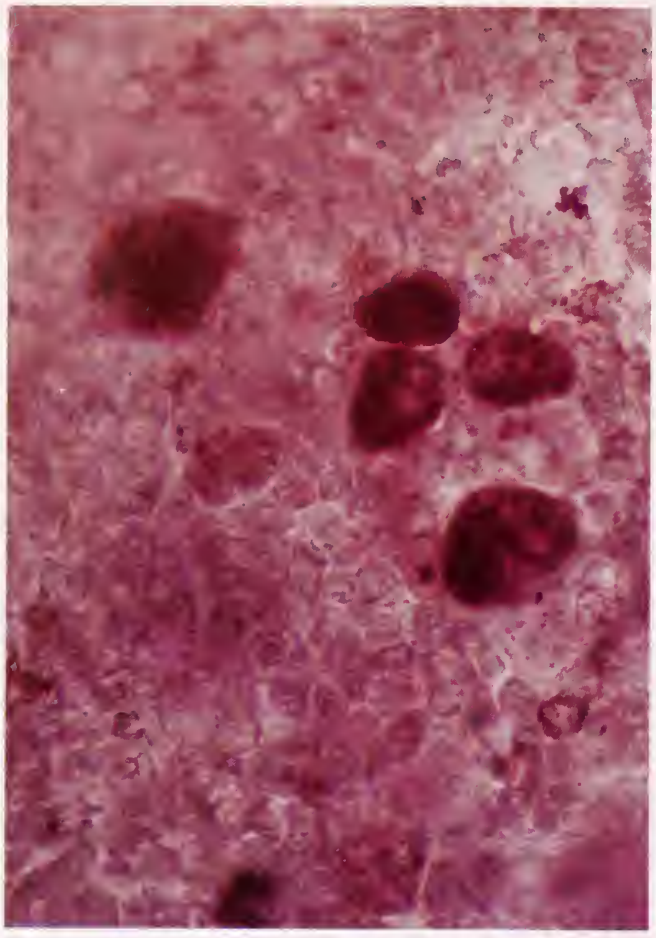


Fig. 1: Oil Red O stain of splenic histiocytes.

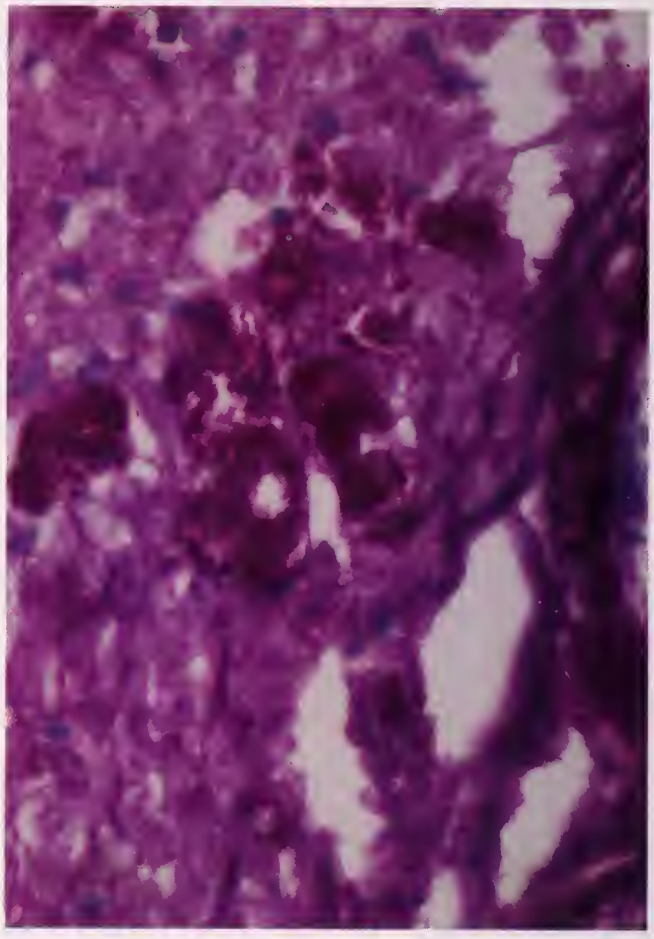


Fig. 2: PAS stain of splenic histiocytes before and after diastase.

atosplenomegaly, purpura and sea-blue histiocytes in the bone marrow. In 1970, Silverstein *et al.*[2] reported the ninth case of the syndrome—a 16-month-old girl with hepatosplenomegaly and sea-blue histiocytes in the bone marrow. In reviewing the first nine patients from the literature Silverstein first proposed the term "sea-blue histiocyte syndrome" to encompass all such cases. Silverstein *et al* tried to identify the substance within these peculiar macrophages by performing lipid analysis of involved liver tissue. Their studies demonstrated the storage of specific phospholipids and glycosphingolipids. While Silverstein *et al* proposed the terminology "sea-blue histiocyte syndrome" to include all cases of this unique set of findings they realized that the clinical course covered a wide spectrum. Some affected patients had a prolonged completely benign course while others had a progressive course resulting in death due to liver failure and bleeding from thrombocytopenia.

After 1970, a number of reports appeared in the literature demonstrating that this unique histiocyte could be found in association with a variety of conditions (discussed below). Subsequently, acceptance of Silverstein's proposed terminology "syndrome of the sea-blue histiocyte" was less than universal. It was the lack of specificity of this histiocyte that led Rywlin *et al*[4] to suggest that Silverstein's term was inappropriate. They suggested that the terminology should be changed to "idiopathic ceroid histiocytosis of spleen and marrow" or, perhaps, even changed to "Silverstein's syndrome."

Silverstein's reply to those who would alter the terminology was brief and eloquent: "There is little picturesque in medicine today; I believe the term "sea-blue histiocyte" should not be abandoned, since it is the striking morphological event of a multifaceted disease-process."[5]

The histologic characteristics of the "sea-blue" his-

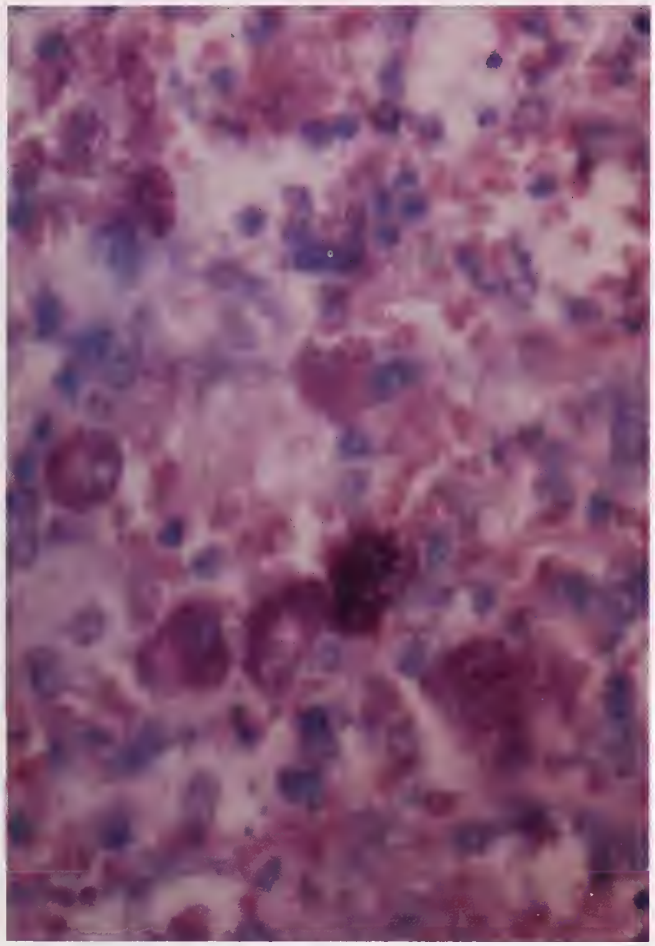


Fig. 3: Acid-fast staining of histiocytes.

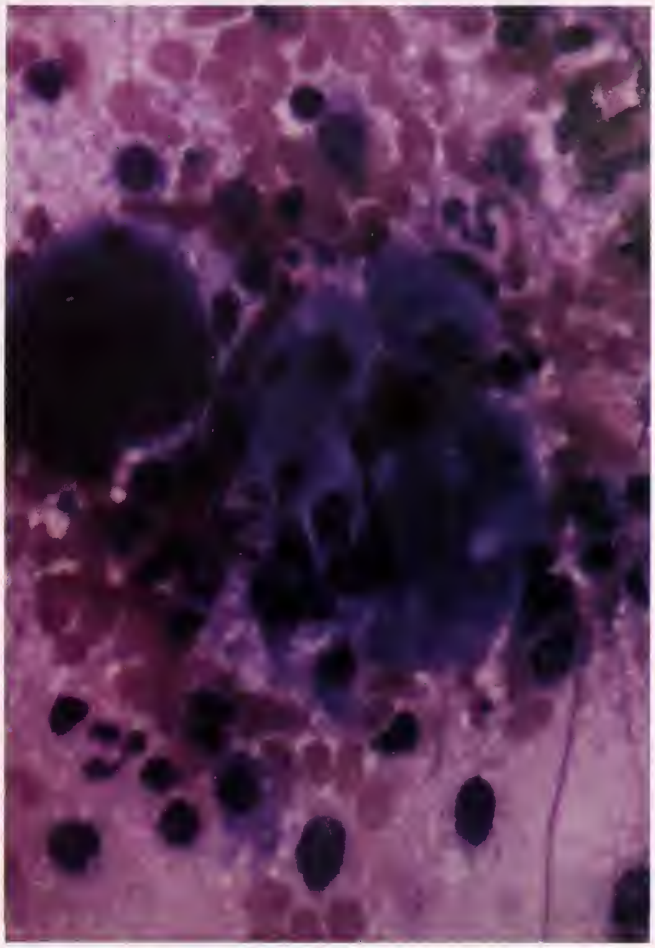


Fig. 4: Wright-Giemsa stain of touch preparation of spleen demonstrating the 'sea-blue' histiocytes.

tiocyte have been described in detail by a number of authors.[1-4,6-10] These cells are found primarily in spleen, liver and bone marrow. Table I summarizes the staining characteristics of the sea-blue (ceroid) histiocytes. Morphologically the sea-blue histiocyte is 20-60 microns in diameter, contains a single eccentric nucleus with block chromatin and a prominent nucleolus; the cytoplasm contains "sea-blue" staining granules (Wright-Giemsa stain) which vary in number, size, shape and staining intensity. A second type of histiocyte is frequently seen that is a large cell with foamy cytoplasm with small, scattered dark granules.[9] The histochemical staining patterns listed in Table I suggest that the sea-blue granules contain glycolipid, phospholipid, sphingolipid or all of these.[2, 9, 10]

As mentioned earlier, the clinical course of the syndrome is variable. In reviewing the first nine cases of the syndrome Silverstein *et al*[2] found that splenomegaly was present in all nine while hepatomegaly was present in six of the nine patients. Three patients had purpura, four had thrombocytopenia, two had cirrhosis, two were jaundiced and one was asymptomatic. Seven of these nine patients pursued a benign course while two died of progressive liver failure.

Sawitsky *et al*[9] summarized the experience of 36 patients. They ranged in age from one year to 83 years, with a mean of 21 years. The incidence between men and women was equal. Hepatosplenomegaly was nearly universal. Six of the 36 patients did not have splenomegaly while two patients did not have hepatomegaly. Lymphadenopathy was unusual and, if present, was mild. Five of the 36 patients had cirrhosis and four died of liver failure. Thrombocytopenia was a prominent feature and only six of 18 patients had normal platelet counts. The authors noted that the degree of thrombocytopenia did not correlate with the magnitude of splenomegaly and splenectomy did not alter the course of the disease. Purpura is common,

TABLE I.

Staining Characteristics of the Sea-Blue (ceroid) Histiocyte

Oil Red O	+
Sudan Black	+
PAS (diastase-resistant)	+
Acid Fast	+
Autofluorescent	+
Giemsa	'sea-blue'
Iron Stain	−
Luxol-Fast Blue	Dark Blue
Nile Blue Sulfate	Dark Blue
Hematoxylin & Eosin	Fine, uniform brown granules
Toluidine Blue	−
Prussian Blue	−
Leukocyte alkaline phosphatase	−

with epistaxis and gastrointestinal bleeding occurring less often. In general, the younger the patient was at the time of diagnosis, the poorer was the prognosis. Genetic studies of the primary syndrome of the sea-blue histiocyte suggest an autosomal recessive mode of inheritance with variable phenotypic expression.[9]

As additional observations were made, demonstrating sea-blue histiocytes in association with other coexistent disease, it became apparent that there were probably two forms of the syndrome—the primary (genotypical) syndrome and an acquired (secondary) form. This realization would tend to reconcile the differences in nomenclature expressed by Silverstein[2,5] and Rywlin *et al.*[4] Cases of the syndrome as originally described by Silverstein *et al*[2] would clearly fall into the primary category while Rywlin's exceptions are accounted for by the acquired forms. Table II lists the diseases or conditions that have been associated with sea-blue histiocytosis. It is beyond the scope of this article to discuss each of these in detail.

The authors believe that the patient reported here is exemplary of the "classic" primary sea-blue histiocyte syndrome described by Silverstein *et al.*[2] Normal liver function, absence of histiocytes in the liver and normal platelet count tend to predict for a benign, protracted course.

From the Trover Clinic, Clinic Drive, Madisonville, KY 42431

TABLE II.

Sea-Blue Histiocytosis

I. Inherited (Genotypical) Sea-Blue Histiocytosis.
 - Syndrome of the Sea-Blue Histiocyte
 - Lewis variant of familial Sea-Blue Histiocytosis
 - Familial lecithin-cholesterol acyltransferase deficiency

II. Acquired (Secondary) Sea-Blue Histiocytosis
 - Idiopathic or Autoimmune thrombocytopenic purpura
 - Leukemia (particularly CML)
 - Polycythemia vera
 - Erythremic myelosis
 - Thalassemia
 - Sickle Cell Anemia
 - Iron Deficiency Anemia
 - Megaloblastic Anemia
 - Hyperlipoproteinemia (Particularly Types III, IV and V)
 - Wolman's Disease
 - Neimann-Pick Disease
 - Adult Lipidosis resembling Niemann-Pick Disease
 - Tay-Sachs Disease
 - Batten's Disease (Neuronal Ceroid-lipofuscinosis)
 - Generalized Kufs' Disease
 - Drug-induced Phospholipidosis
 - Chronic Granulomatous Disease of Childhood
 - Familial Lipochrome Histiocytosis
 - Ceroid Storage Disease of Childhood
 - Hermansky-Pudlak Syndrome
 - Gaucher's Disease
 - Ceroid Accumulation or Sea-Blue Histiocytosis in progressive neurological disease
 - Hurler's Syndrome
 - Fabry's Disease
 - Hodgkin's Disease
 - Mycosis Fungoides
 - Rheumatoid Arthritis
 - Takayasu Arteritis
 - Hepatic Prophyria and Infectious Mononucleosis
 - Metachromatic Leukodystrophy
 - Globoid Leukodystrophy
 - Visceral Histiocytic Glycolipidosis with mental retardation
 - Vascular Pseudohemophilia associated with ceroid pigmentophagia in albinos

References 1. Sawitsky A, Hyman GA, Hyman JB: An unidentified reticuloendothelial cell in bone marrow and spleen: Report of two cases with histochemical studies. *Blood* 9:977-985, 1954. 2. Silverstein MN, Ellefson RD, Ahern EJ: The syndrome of the sea-blue histiocyte. *N Eng J Med* 282:1-4, 1970. 3. Wewalka F: Zur Frage der "glauen Pigmentmakrophagen" im Stermalpunktat. *Wien Klin Wschr* 62:788, 1950. 4. Rywlin AM, Lopez-Gomez A, Tachmes P, Pardo V: Ceroid histiocytosis of the spleen in hyperlipemia: Relationship to the syndrome of the sea-blue histiocyte. *Amer J Clin Path* 56:572-579, 1971. 5. Silverstein MN: Syndrome of the sea-blue histiocyte. *Lancet* 2:572, 1970. 6. Karayalcin G, Rosner F, Sawitsky A: Sea-blue histiocyte syndrome in an octagenerian. *Lancet* 2:318, 1971. 7. Ardeman S, Lewis JG: Syndrome of the sea-blue histiocyte. *Lancet* 1:797, 1972. 8. Teloh HA, Rywlin AM: Idiopathic ceroid histiocytosis of spleen: Syndrome of the sea-blue histiocyte. *Ann Clin Lab Sci* 2:175-185, 1972. 9. Sawitsky A, Rosner F, Chodsky S: The sea-blue histiocyte syndrome, A review: Genetic and biochemical studies. *Semin Hematol* 9:285-297, 1972. 10. Silverstein MN, Ellefson RD: The syndrome of the sea-blue histiocyte. *Semin Hematol* 9:299-307, 1972.

Malignant Hyperthermia

W. STERRETT FOSTER, M.D. AND ROBERT D. WOLFE, C.R.N.A.

Malignant hyperthermia is a sudden and unexpected life-threatening emergency in the operating room. Early recognition and treatment is vitally important in reducing the 50-60% mortality rate associated with this disease. A recent case is presented which responded promptly and dramatically to vigorous therapy.

MALIGNANT hyperthermia was first described in 1962 by Denborough.[1] It is one of the most terrifying of all anesthesia complications, with a mortality rate that is estimated at 50-60%.[2] While its true incidence is not known, it has been estimated that one in 15,000 children and one in 50,000 adults may be at risk.[3] M.H. has been associated with all potent inhalation agents, depolarizing and non-depolarizing muscle relaxants, spinal anesthesia and even local anesthetics of the amide group.[4,5] Successful therapy depends on rapid diagnosis and extremely aggressive therapy. Preoperative diagnosis is not practical with current laboratory examinations.

A Case Study: A 19-year-old white female weighing 50 kilograms was scheduled for a laparoscopic examination for right lower quadrant pain. Her routine preinduction examination revealed a slightly elevated serum potassium of 5.2 mEq/L. She had received past anesthetics without problems and did not know of any familial problems with anesthesia.

Induction was routine with sodium thiopenthal; nitrous oxide; isoflurane, a new potent inhalation agent; and succinylcholine. Initial vital signs were pulse 78, blood pressure 110/78, and temperature 97°. Fasciculations from the succinylcholine were minimal, and the masseters were relaxed within one minute of injection. Intubation took place without incident. Within three minutes after intubation the pulse had risen to 170 per minute, and the blood pressure was 180/80. A temperature probe was passed into the esophagus to establish a core temperature. The temperature at this time was rising rapidly, and a presumptive diagnosis of malignant hyperthermia was made. All anesthetic agents were discontinued; and the patient was hyperventilated with 100% oxygen. The drapes were immediately removed, and cold packs were placed along the axilla, thorax and groin. Another large bore intravenous catheter was started, and pre-chilled Ringer's lactate solution was infused at a rapid rate. Dantrolene sodium was infused rapidly at a rate of 1 mg/kg. The patient began to respond within three minutes; and the temperature, which had risen to 102.5°, dropped 1°. Shivering and aimless movements began. At this point 1.5 cc. of fentanyl was infused, and high-flow ventilation continued. The patient was transported to the recovery room with the endotracheal tube in place and manual ventilation. The temperature continued to fall. At that same time laboratory specimens were obtained. She was extubated in 30 minutes. A rectal probe was in place during the entire recovery room period, with a constant readout of her core temperature. The patient awakened normally, and laboratory values were only significant in that a SGOT of 60 international units per liter and a CPK of 710 international units per liter were reported. Blood gases and acid base status were normal. Serum potassium was 4.0.

The patient's recovery was uneventful; and after three days of routine observation, she was discharged. Careful instructions were given to the patient regarding the nature of her problem.

Discussion: In his original work on M.H., Denborough noted this condition as a familial problem in which the disease was transmitted as an autosomal dominant genetic characteristic.[1] It is felt to be a single dominant gene, not sex-linked, and more prevelant in adult males.[6] However, studies since that time have made it increasingly obvious that reduced penetrance and especially variable expressivity are characteristics of the condition. In fact, most cases are non-familial, and over one-third of the cases occur during a second or third subsequent anesthetic administration.[5] Diagnosis of M.H. is generally not possible preoperatively at this time without muscle biopsy.[7] Familial history may yield great suspicion. Occasionally a patient with a history of muscle weakness, difficulty in temperature control or mild neuro-muscular problems would seem

to he at higher risk. The serum creatine phosphokinase was originally thought to be a diagnostic tool of great value. However, over one-third of M.H. patients have normal CPKs and, indeed, when the CPK is elevated it may be due to unrelated factors such as stress, drug intake, or recent muscle injury.[8]

The symptoms of M.H. are often preceded by a prodromal phase, which to the alert anesthesiologist will create an immediate suspicion of impending disaster.[9] The rigidity of the masseter muscles following succinylcholine administration is the primary example of the prodromal sign. The most common early sign, however, is unexplained tachycardia. A rapid onset of tachycardia without surgical stimulation or other cause creates immediate suspicion. Rapidly changing blood pressure and cardiac arrhythmias of ventricular origin are also often seen at this time. Routine monitoring of the core temperature shows a rapid rise in temperature, which may reach 108°F. However, this temperature rise is often a late sign.[10] Profuse sweating and cyanosis of the extremities despite high oxygen concentrations are often noted. Laboratory values will show a combined metabolic-respiratory acidosis, hypoxemia, hyperkalemia, myoglobinuria and elevated lactate and pyruvate levels. However, these laboratory values are most often received after the disease process has run its course and aggressive treatment has been instituted. The single most effective treatment scheme for M.H. is awareness and preparedness on the part of the operating team to handle this rare emergency. Operating personnel should be fully aware of the rapid onset and serious nature of the condition, as well as the basic steps in its treatment. Any increase in response time to initial therapy will allow the process to progress and decrease the probabilities of a favorable outcome. Once the diagnosis has been made, it is imperative that anesthetic agents be discontinued immediately. The patient should be hyperventilated with 100% oxygen and cooled rapidly by packing in ice packs. High volumes of cooled intravenous saline should be infused. Occasionally, the stomach, rectum and peritoneal cavity have been lavaged with iced saline solution. In one episode cardiopulmonary bypass was utilized to decrease the patient's temperature.[11] Diuretics are helpful in preventing myoglobin from sludging in the renal tubules which may lead to renal failure. The metabolic demands of malignant hyperthermia necessitate the administration of sodium bicarbonate to regulate acid base balance. High levels of dextrose and insulin are needed to provide calories. The greatest advance in the treatment of M.H. has been the introduction of dantrolene sodium as an approved adjunctive measure to its therapy. Dantrolene is a muscle relaxant that acts specifically on the muscle cells to prevent the increase of calcium within the muscle cell and interferes with the catabolism which seems to take place during the acute crisis of M.H.[12] It has been noted that in most cases the initial dosage of dantrolene is sufficient. However, in some cases repeat dosages over two to three days may he necessary to prevent exacerbations of the condition.[13] Patients with a high index of suspicion or a previous episode of M.H. should be treated with dantrolene preoperatively.

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Fentanyl	Sublimaze®
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Summary: Great advances have been made in the diagnosis and treatment of this life-threatening situation. However, there are many factors that are not completely known. We do not know the true frequency of M.H.; the many forms by which it may be expressed; or the number of deaths that may be attributed to this condition throughout the United States. We do not know if permanent physiologic or neurologic damage results in survivors of aborted cases or the optimum dosage of the drugs utilized to treat M.H. Growing awareness on the part of the medical and lay population has led to the formation of an international M.H. registry at the University of Toronto and the Malignant Hyperthermia Association of the United States (MHAUS) at Darien, Connecticut. Patients who have had an episode of malignant hyperthermia are no longer suitable candidates for induction into the armed forces, and in some cases their life insurance premiums have been raised. Continuing research will be needed to finally confirm the molecular dysfunction that generates this bizarre response to anesthetic agents.

References 1. Denborough MA, Forster JFA, Lovell RRH, *et al:* Anaesthetic Details In A Family. *J Anaesth* 34:395-396, 1962. 2. Britt BA: Malignant Hyperthermia. IN: *Metabolic Aspects of Anesthesia.* Edited by P. J. Cohen. F. A. Davis Co., Philadelphia, 1975, pp. 61-74. 3. Britt BA: Recent Advances In Malignant Hyperthermia. *Anesth Analg* 54:841, 1972. 4. Pollock R: Prior Drug Intake Malignant Hyperthermia, International Symposium On Malignant Hyperthermia. Edited by R. A. Gordon, B. A. Britt, W. Kalow. Springfield, Ill., Charles C. Thomas, 1973. 5. Britt BA, Kalow W: Malignant Hyperthermia: A Statistical Review. *Canad Anaesth Soc J* 17:293, 1970. 6. Britt BA: Malignant Hyperthermia: A Pharmacogenetic Disease of Skeletal and Cardiac Muscle. *New Eng J. Med* 290:1140, 1974. 7. Malignant Hyperthermia: A Review. *J Am Med Wom Assoc* 1980. App:35040:95-8. 8. Addis PB, Britt BA, Henderson AR, *et al:* Muscle Creatine Kinase Isoenzymes In Human and Porcine Subjects Susceptible to Malignant Hyperthermia. IN: *Malignant Hyperthermia.* Edited by J. A. Aldrete and B. A. Britt. Grune and Stratton, New York, 1978, pp. 227-232. 9. Ryan JF: Malignant Hyperpyrexia, Etiology and Treatment. II. Treatment. 1976 Annual Refresher Course Lectures. American Society of Anesthesiologists *Annual Meeting* p. 210B. 10. Britt BA, Kwong FHF, Endrenyi L: Management of Malignant Hyperthermia Susceptible Patients. A Review. IN: *Malignant Hyperthermia:* Current Contents. Ed. Henschel EO. Appleton. Century. Crafts, New York, 1977, p. 74. 11. Ryan JF, Donlon JV, Malt RA, *et al:* Cardiopulmonary Bypass In the Treatment of Malignant Hyperthermia. *New Eng J Med* 290:1121, 1974. 12. Austin KL, Denborough MA: Drug Treatment of Malignant Hyperpyrexia. Anesthesia and Intensive Care 5:207-213, 1977. 13. Gronert GA, Mansfield E, Theye RA: Rapidly Soluble Dantrolene for Intravenous Use. Second International Symposium on Malignant Hyperthermia. Ed. A. Aldrete, B. Britt, New York, 1978, Grune and Stratton, pp. 535-536.

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Assessment of Abdominal Injuries

H. WILLIAM SCOTT, JR., M.D., F.A.C.S.

TRAUMA is said to be the principal cause of death in Americans between ages one and 44 years and the third leading cause of death for all age groups in this country. Over 100,000 lives are lost each year because of accidental injuries and nearly 500,000 injured individuals annually sustain permanent disability from a wide variety of injuries.

According to Dunphy and Way,[1] the economic cost to the nation exceeds $41,000,000,000 annually and a permanent loss of millions of work years. Obviously physicians and surgeons, and indeed all medical personnel, need to work together to reduce the incidence of trauma by demanding improved auto safety design, mandatory use of seat belts, continuance of the national 55 m.p.h. speed limit, tough drunk driving laws, mandatory use of helmets for motorcyclists and improved highway safety design. (Table 1)

In addition, physicians and surgeons need to collaborate in the effort to improve the care of injured patients by enhancement of emergency care both at the scene of accident and during ambulance transport and by developing categorization of hospital emergency services, as has been requested by the American College of Surgeons, and by the establishment of regional trauma centers. (Table 2)

My assignment is to discuss the assessment of abdominal injuries. Abdominal trauma can best be classified as penetrating or blunt.

Penetrating Injuries

Penetrating abdominal injuries in American civilian practice are most commonly due to gunshot wounds, usually from small caliber pistol and rifle fire, less frequently from shotguns and high velocity firearms. Stab wounds from knives are second in frequency to gunshot wounds. Weapons used in assault in the United States are much more often the cause of penetrating abdominal injuries than are penetrating wounds sustained in motor vehicle accidents, or industrial, farm and household injuries.

In high velocity missile wounds blast effects may damage wide areas adjacent to the missile tract. Middle and lower thoracic missile wounds should always raise the question of transdiaphragmatic penetration with injury to upper abdominal viscera.

Assessment and management of penetrating wounds of the abdomen remain controversial. Twenty years ago almost all surgeons agreed that laparotomy was mandatory in all patients with penetrating abdominal wounds.

Shaftan[2] raised a challenge to this mandatory policy in 1960 by advocating laparotomy **only** for patients who had signs of abdominal injury on physical examination. Subsequently, Nance and his associates[3] have advocated a similar policy guided by more detailed assessment of injury than physical examination alone. (Table 3)

Most surgeons today I believe continue to advocate mandatory laparotomy for all patients with gunshot wounds of the abdomen, reserving the selective criteria of Nance for stab wounds of the abdomen. Questions are properly raised about the reliability of the various diagnostic criteria, the risks of the conflicting policies and the risks of negative laparotomy.

In a review of patients admitted to Nashville Metropolitan General Hospital with penetrating abdominal wounds and treated with the policy of mandatory laparotomy, Carter and Sawyers[4] observed that approximately one half of the patients had no visceral injury that required operative repair, but no mortality occurred in the patients with negative findings at laparotomy. Two percent of patients, however, did develop small bowel obstruction from adhesions that required subsequent operative intervention. Initial diagnostic evaluation to determine the presence of visceral injury was unreliable in about one third of the patients.

Bull and Mathewson[5] have reported a similar experience from the University of California in San Francisco. In their report 23% of 78 patients with significant visceral injury due to penetrating trauma

TABLE 1

TO REDUCE THE INCIDENCE OF TRAUMA

IMPROVED AUTO SAFETY DESIGN
MANDATORY USE OF SEAT BELTS
NATIONAL 55 M.P.H. SPEED LIMIT
TOUGH DRUNK DRIVING LAWS
MANDATORY USE OF HELMETS FOR MOTORCYCLISTS
IMPROVED HIGHWAY DESIGN

TABLE 2

TO IMPROVE CARE OF INJURED PATIENTS

ENHANCEMENT OF EMERGENCY CARE
AT SCENE OF ACCIDENT
DURING AMBULANCE TRANSPORT
CATEGORIZATION OF EMERGENCY SERVICES
ESTABLISHMENT OF REGIONAL TRAUMA CENTERS

TABLE 3

PENETRATING WOUNDS OF ABDOMEN

1. LAPAROTOMY FOR ALL
2. LAPAROTOMY ONLY WHEN INDICATED:
 A. BY EXPLORATION OF WOUND
 B. BY X-RAYS, SCANS, OR SINOGRAMS
 C. BY PERITONEAL LAVAGE
 D. BY PERITONITIS

TABLE 4

INJURIES FROM BLUNT ABDOMINAL TRAUMA

SPLEEN	DUODENUM
LIVER	SMALL BOWEL
KIDNEY	VENA CAVA
BLADDER	STOMACH
PANCREAS	COLON

TABLE 5

PERITONEAL LAVAGE:
CRITERIA FOR POSITIVITY

GROSS BLOOD RETURN (> 10 ML)
MORE THAN 100,000 RBC/MM^3
MORE THAN 500 WBC/MM^3
AMYLASE >100 SOMOGYI UNITS
PRESENCE OF BILE
BACTERIA
FECES

had no preoperative physical signs of injury while 18% of 100 patients did have physical signs of visceral injury, but surgical exploration showed that the penetrating wound had not entered the peritoneal cavity. Bull and Mathewson advocate mandatory laparotomy for all patients with penetrating abdominal injuries.

A similar viewpoint has been voiced by Forde and Ganepola[6] of the Harlem Hospital Center and the College of Physicians and Surgeons of Columbia University in New York City. A negative laparotomy in 329 patients caused no mortality and only minor complications in 8.7% of their patients. During a followup of four years none of their patients required a subsequent laparotomy for intestinal obstruction. These authors advocate mandatory laparotomy for all patients with penetrating abdominal injuries.

Accordingly, if you will accept my advice, penetrating abdominal injuries require minimal preoperative assessment. Emergent laparotomy is mandatory in these patients for both diagnosis and repair of potential visceral injury. If doubt exists as to penetration of the peritoneum, peritoneal lavage is the most reliable test.[7]

Blunt Injuries

Injuries from blunt trauma are more common than those from penetrating wounds and are also more difficult to assess. Blunt abdominal trauma tends to injure solid viscera such as the spleen, liver, kidney and pancreas. If the bladder is distended, it may be injured and much less commonly the small bowel, the duodenum and quite rarely the stomach or colon.

However, deceleration forces, particularly from motor vehicle accidents and from falls, may tear viscera from areas of fixation. For example, the liver may be torn from the diaphragm and inferior vena cava, the bladder from its neck and the gut from its mesentery.

A seat belt or a steering wheel in exerting force against the abdomen may disrupt any of the organs that lie close to the vertebral column, notable the pancreas, duodenum, inferior vena cava and its major tributaries. (Table 4)

Most patients with major blunt abdominal trauma especially in motor vehicle accidents have other injuries, such as craniocerebral injuries, fractures of long bones, pelvis, spine or multiple ribs.

A history of the mechanism of injury can be very helpful, especially if a direct blow to the abdomen has occurred. Abdominal pain and tenderness, the most common manifestations of visceral injury, can be difficult to differentiate from the pain and soreness of associated injuries such as fractures of vertebral bodies, ribs or pelvis.

In the comatose patient or one with multiple injuries, the presence of localized or generalized spasm of abdominal musculature is the best physical indicator of visceral injury. In the conscious patient, localized or generalized tenderness with accompanying involuntary muscular spasm remains the most reliable physical indication of abdominal visceral injury.

Both of these findings are clear indications for laparotomy.

Some patients with intraperitoneal injuries from blunt abdominal trauma may have few overt clinical manifestations. In such cases it is important to have a very high index of suspicion that significant visceral injury has been sustained.

Peritoneal lavage can give great help in such diagnostic dilemmas and can aid in affirming or negating the presence of significant visceral injury.[7]

In patients with no previous evidence of laparotomy a site 2-3 cm. below the umbilicus is selected. After local infiltration with 0.5 or 1% xylocaine, a small (1 cm.) incision is made through skin, linea alba and peritoneum. If gross evidence of properitoneal hematoma is present, this approach is abandoned and a similar procedure is carried out 2-3 cm. above the umbilicus.

After insertion of the dialysis catheter into the peritoneal cavity, one liter of balanced salt solution is infused and the intraperitoneal fluid subsequently siphoned off into the reservoir container.

Criteria of positivity according to Flint[7] for peritoneal lavage in patients with abdominal trauma are listed in table 5. A minimum of 350 ml. of peritoneal fluid must be obtained to permit accurate assessment of red cell and white cell counts and amylase measurement.

Laparotomy is mandatory if any of these criteria are positive.

Ahmad and Polk[8] report an overall accuracy of 97% using these criteria and a complication rate of only 0.8% at the University of Louisville School of Medicine.

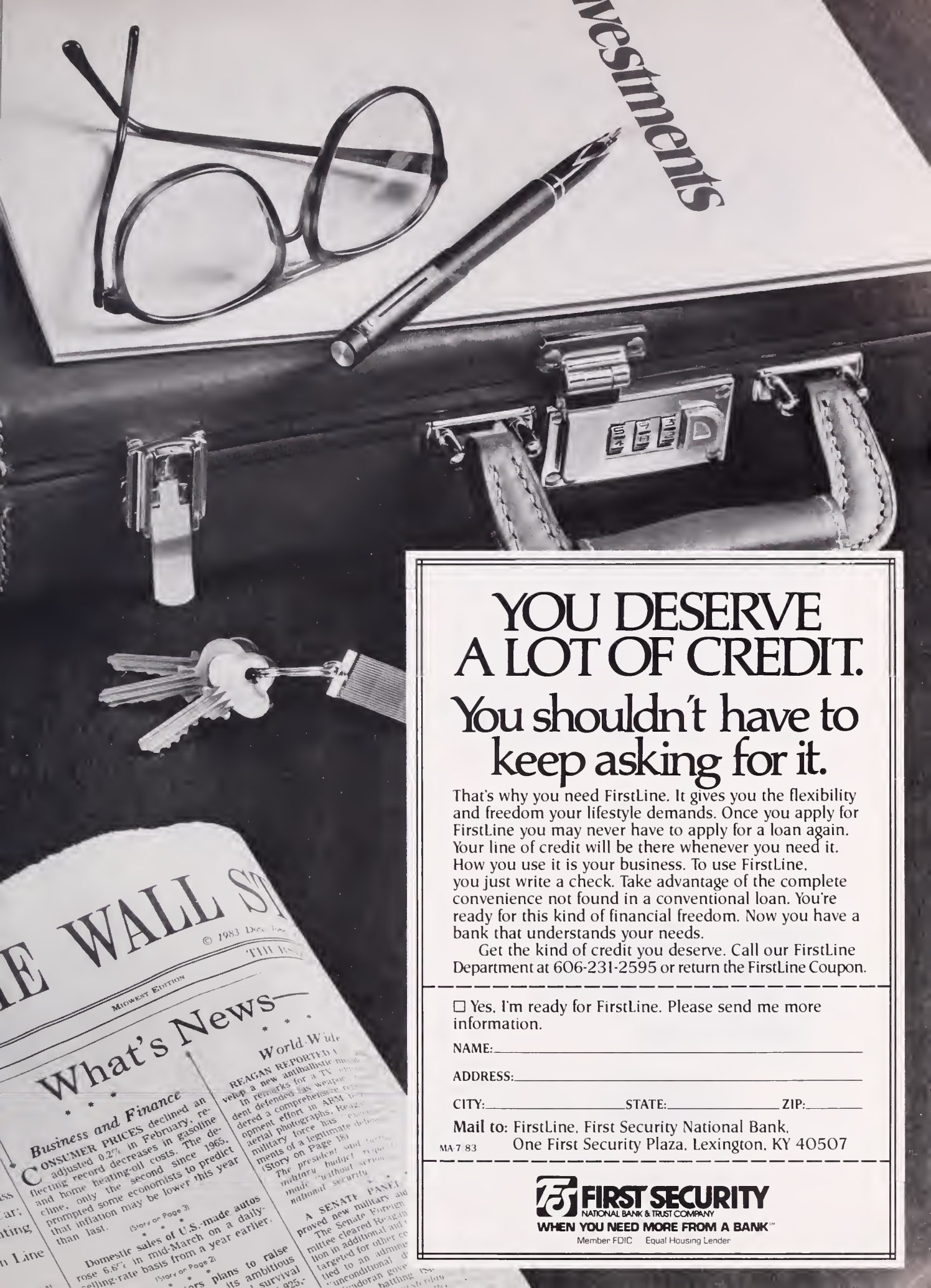
In the September issue of the "American Surgeon," which is devoted to shock and trauma, there are two articles highly pertinent to this presentation. In one prospective study by Rodriquez, Du Priest and Shatney[9] in 221 blunt trauma patients the accuracy of physical examination was compared with peritoneal lavage as an indicator for laparotomy. It was their conclusion that "significant error accompanied the initial abdominal examination and clinical assessment in the blunt trauma victim. In contrast, open diagnostic peritoneal lavage is a sensitive and highly accurate test for blunt intraperitoneal injury. We believe peritoneal lavage is the single best test for intra-abdominal injury and should be performed in the majority of patients with such injuries."

The second article by DuPriest, Rodriquez and Shatney[10] has to do with peritoneal lavage in adolescents and children with blunt abdominal trauma. In 135 trauma victims under age 16 years who underwent peritoneal lavage the overall accuracy rate was 95.5%. There were no false negative results.

It was their conclusion that open diagnostic peritoneal lavage is the single best test for detecting serious intra-abdominal injury following blunt trauma in children and adolescents.

References 1. Dunphy JE and Way L: Current Surgical Diagnosis and Treatment (5th Edition), Chapter 16, pg. 181. Lange Medical Publications, Los Altos, CA 1981. 2. Shafton GW: Indication for Operation in Abdominal Trauma. *Am J Surg* 99:657, 1960. 3. Nance FC, Wennar MH, Johnson LW, et al: Surgical Judgment in the Management of Penetrating Wounds of the Abdomen: Experiences with 2,212 Patients. *Ann Surg* 179:639, 1974. 4. Carter JW and Sawyer JL: Abdominal Stab Wounds Studied by Injection of Contrast Media. *Surgery* 63:597, 1968. 5. Bull JC and Matthewson C: Exploratory Laparotomy in Patients with Penetrating Wounds of the Abdomen. *Am Jour Surg* 116:223, 1968. 6. Forde KA and Ganepola GRP: Is Mandatory Exploration for Penetrating Abdominal Trauma Extinct? The Morbidity and Mortality of Negative Exploration in a Large Municipal Hospital. *Jour Trauma* 14:764, 1974. 7. Flint, Lewis M: The Initial Management of the Multiple Injury Patient. *Surgical Rounds* 5:26, July, 1982. 8. Ahmad W and Polk HC Jr: Blunt Abdominal Trauma—A Prospective Study with Selective Peritoneal Lavage. *Arch Surg* 111:489, 1976. 9. Rodriquez A, RW DePriest, Jr, Clayton H Shatney: Recognition of Intra-abdominal Injury in Blunt Trauma Victims: A Prospective Study Comparing Physical Examination With Peritoneal Lavage. *Am Surgeon* 48:456, September, 1982. 10. DuPriest RW Jr, Rodriquez A, Shatney Clayton H: Peritoneal Lavage in Children and Adolescents With Blunt Abdominal Trauma. *Am Surgeon* 48:460, September, 1982.

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EDITORIAL

In this present climate of evermore frequent malpractice suits, the profession of medicine needs a restatement of its worth.

While there are, and always will be, some unprincipled and negligent physicians, the vast majority are competent, dedicated and unselfishly interested in the welfare of their patients.

The practice of medicine is not just another profession. It is more than the skillful application of technical expertise. Rather the practice of medicine has the priestlike quality of a sacred trust.

We are present at the beginning of life and the companion on the final path to death. And we are privy to all the foibles of a flawed humanity—the revelation of inmost thoughts, hopes, dreams, sins, ambitions, and failures are ours to hear and to assuage as best we can.

We are expected to know what to do to cure if we can, and to relieve if we cannot cure. We are expected to perform expertly without compromise by our own weaknesses. Fatigue must be overcome. Anger must be suppressed. And unfair criticism must be shouldered with equanimity and good grace.

None of this is easy. At times it is impossible. Temporarily patients will become more than we can bear. Mistakes will be made either because we are tired or too busy or simply not thinking. Mistakes will seldom be made because we are ignorant or not trying. At times we will want to quit, do something else, retire. However, a good night's sleep, a small success, a few days off, a note of thanks are marvelously restorative.

Let us not be discouraged, our successes far outnumber our failures. We do not always cure, death cannot be prevented, but our presence in time of need counts for more than we realize. Because ours is a sacred trust the same source of that trust gives us strength in time of need.

Paul C. Grider, Jr., M.D.

Roche salutes the history of Kentucky medicine



THE DOCTOR WHO PIONEERED ABDOMINAL SURGERY

Dr. Ephraim McDowell

In 1795, Dr. Ephraim McDowell of Virginia settled in the village of Danville, Kentucky. His practice took him on horseback over hundreds of miles of wilderness.

Nevertheless, his reputation as a skillful and successful surgeon spread—especially for lithotomies, which he performed 22 times without losing a patient.[1]

First ovariotomy

McDowell's true moment in history came in 1809, when he performed the first known ovariotomy for removal of a tumor from Jane Crawford, then 47. The procedure was completed in 25 minutes, and Mrs. Crawford not only recovered but lived to age 78.[1,2]

This landmark surgery was performed under the most primitive conditions—without anesthesia or antisepsis—while, the story is told, brave Mrs. Crawford distracted herself as best she could by singing hymns.[2]

His published reports of this case, along with two others in 1817 and an additional two in 1819, established Dr. McDowell as the physician who saved women afflicted with ovarian disease from their previously hopeless situation and, further, marked the beginning of abdominal surgery.[1] To European medical practitioners, Dr. McDowell's accomplishments offered clear evidence that medicine was coming of age in America.[3]

References: 1. Garrisan FH *An Introduction to the History of Medicine*, 4th ed. Philadelphia, W. B. Saunders Company, 1929, pp. 507-508. 2. Packard FR: *History of Medicine in the United States*, vol. II. New York, Hafner Publishing Company, 1963, pp. 727-728. 3. Shaftel N. The evolution of American medical literature, in *History of American Medicine*, edited by Marti-Ibañez F, New York, MD Publications, 1959, p. 106



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References: 1. Rickels K: Drug treatment of anxiety, in *Psychopharmacology in the Practice of Medicine,* edited by Jarvik ME; New York, Appleton-Century-Crafts, 1977, p. 316. **2.** Feighner JP *et al: Psychopharmacology 61*:217-229, Mar 1979. **3.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated: sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.
Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500, Tel-E-Dose® packages of 100; Prescription Paks of 50

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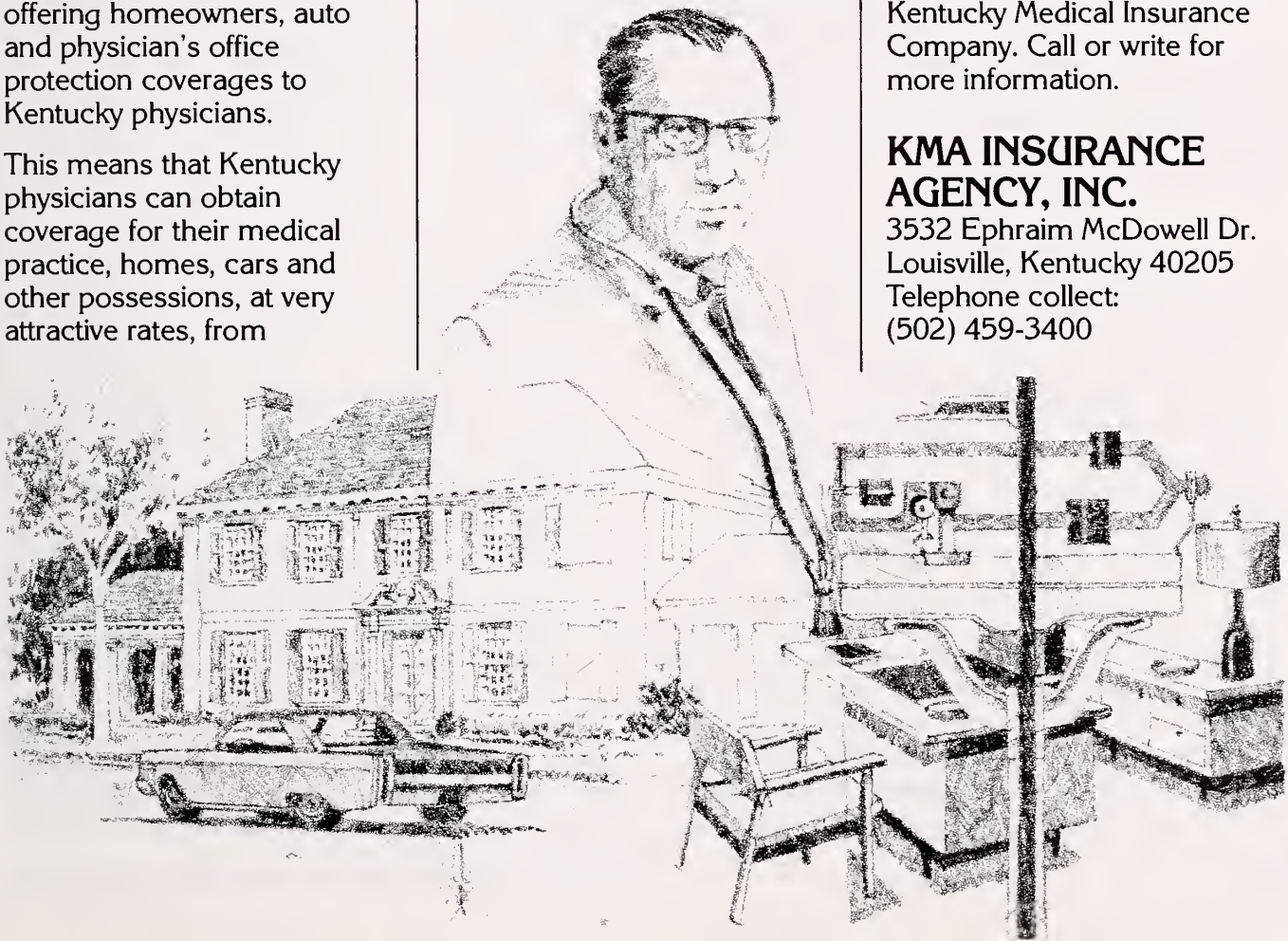
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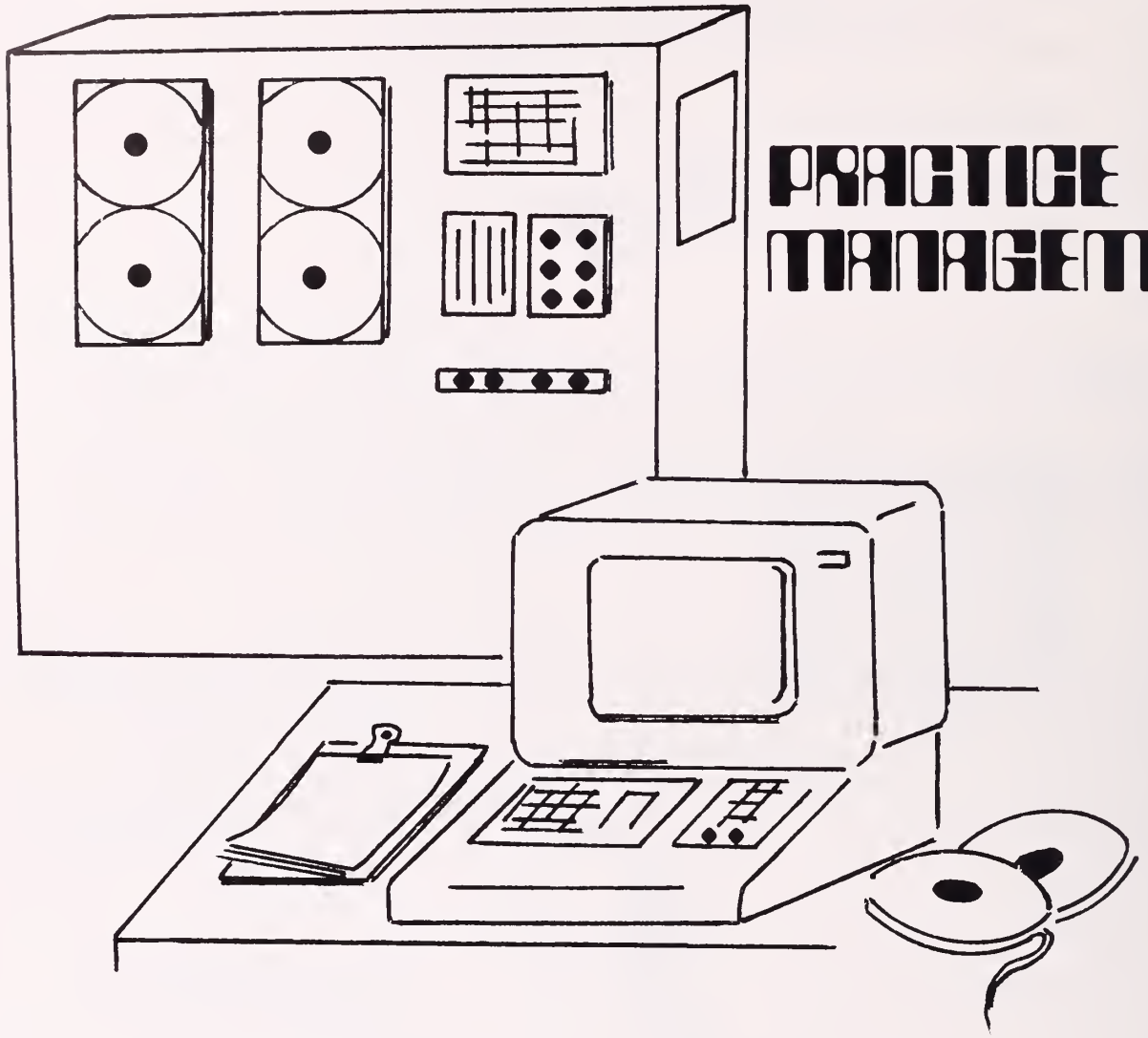
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Pico's insurance services in Kentucky are endorsed by the Kentucky Medical Association and are offered through KMA Insurance Agency, Inc., in cooperation with the Marketing Department of the Kentucky Medical Insurance Company. Call or write for more information.



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SPECIAL ARTICLE



PRACTICE MANAGEMENT

Request for Proposal

The review and evaluation of computer systems is a long and involved process for many, but with adequate planning an individual can extract the information needed from prospective vendors to make an objective decision.

A request for proposal is a vendor's bid which lists the hardware configuartion and software applications to meet your needs. Although you may have had a systems analysis done and are aware of the systems that can meet your needs, it is still important to have the vendor bid on your request. It is recommended that you use your consultant's report as a guide in reviewing your proposals. Do provide the vendors with as much information as possible about your practice and applications, but do not inform them of the size system recommended nor the memory and storage allocation figures the systems analysis lists. It is best to make the vendors configure these amounts based on the information provided by you. You will wish to give them a list of input/output devices, but when it comes to determining the size of the system (CPU and memory size), the vendor should be requested to recommend a system. Again, your systems analysis should have a recommendation, but this should be used for comparison purposes.

Before requesting a proposal you should have already written your applications, determined your equipment needs (number of terminals, printers, etc.) and have thoroughly evaluated your financial and managerial resources.

As we have already mentioned, the purpose for a "Request for Proposal" is to invite computer vendors to bid on your request which enables you to adequately review the products currently on the market. If you

are uncertain to whom to submit your proposal, ask your consultant to give you a list of local vendors. You may also contact your state medical association or local Better Business Bureau. Most of the major manufacturers are listed in the Yellow Pages and this source can be used to augment your list of prospective vendors.

A "Request for Proposal" will consist of four items:

- introductory letter
- practice profile
- list of applications requested
- request for proposal list

These collective items will assist you in obtaining the information necessary to make a constructive and thorough review and evaluation of the computer systems available.

Introductory Letter

The introductory letter explains the purpose of your request and the exact information you desire from the vendor. The letter should include the following:

- invitation to submit a proposal based on information provided by you
- name of contact person in your office to answer additional questions if you do not plan to be that person (I recommend that you use your office manager because you could be inundated with calls.)
- request for specifics on proposed applications
- request inclusion of vendor's standard contract for initial purchase of hardware, software, installation and support
- a date for reply and desired number of copies of proposal plus additional documentation such as brochures and technical specifications
- the process you will use for selection and if you will desire a demonstration of the system. (Usually you will want to reserve this option for the final three systems you plan to do an in depth review of.)
- the date by which you plan to make a selection and a thanks to the vendors for their efforts. Computation of this data does take the vendor a considerable amount of time

Practice Profile

Since you do not wish to spend an excessive amount of time meeting with a number of computer vendors and repeating yourself numerous times, you will want to prepare a practice profile to highlight your operations. The practice profile provides factual data about your daily functions and volume of business. This profile should include quantitative and subjective review of your practice. Under the quantitative section include:

- number of physicians in practice and if it is multi-specialized
- patient population both active and inactive
- number of hospital admissions
- number of transactions broken down by number of payments, billing statements and insurance
- types of insurance forms (include samples if this is an application you desire undertaken by the computer)
- personnel titles and duties (*eg.* bookkeepers, receptionists, med-techs, etc.)
- total records (files) currently maintained
- number of form letters used in referrals, consultations and collections

Under the subjective section discuss:

- how your billing statements are structured and the information required on them. Do you use a peg board system or other type of manual accounting system? Is there any automation currently used?
- how you file your insurance claims and how often. What is the monthly volume? Is one month bigger than the other? How many insurance companies do you file with? Provide a list of these companies and samples of their forms or a copy of the AMA uniform claim form if applicable.
- how your accounts receivable history is. What is the percentage of collections for the past six months? What is the percentage of payments compared to charges? List the distribution of receivables in 30-day increments through 120 days.
- how your office handles consultations, referrals and other correspondence.
- other pertinent information about your practice that would be helpful to a vendor trying to adequately understand your operations.

Remember, it is important to spend the time on the detailed preparation of this profile. Not only will this give you the necessary documentation to assist with your evaluation, but it will also give you a close look at your management of your practice and may highlight some changes that should be made before the installation of a computer system.

Applications Requested

The applications requested are a list of tasks or jobs you have decided upon, either through your own evaluation or as prepared by your consultant at the time of your systems analysis. Your applications have been configured on available resources, personnel and priority of jobs. If your applications describe specific reports or use pre-printed forms, samples of these should be included with your request. Certain vendors have multipurpose software that can be modified by the operator to meet your needs. This multi-purpose software is usually pre-developed (canned) software and less expensive than individually developed software packages. Most applications can readily utilize pre-developed software with minor modifications. By including all forms and the format of your desired output you can quickly determine which vendor can come closest to meeting your specific needs. Otherwise you may not be certain which software will best meet your application needs and conversely may require office procedure changes to conform with the software. It is not to say that there will be no changes in your office operations, but it is best to keep them to a minimum.

Include samples of codes that you currently use in your billing process or for posting information on the patient charts. (*eg.* CPT-4 procedural code and ICDA-9th edition diagnostic code) Also include any special forms you may require for your office procedure. List all applications desired even if you do not plan to use them all or presently have insufficient finances to cover them. The comparison will give you an excellent idea of the expenses to budget for the future while giving you additional items to use in comparisons. This should not only include software applications, but hardware also.

Although your anticipated utilization of the system is not an application, it is nonetheless, an important factor to the overall optimization of your computer. The location of the terminals and printers is important. For example, a printer located at another office in another building will require additional hardware, and based on your speed of output requirements, may require special modifications or a specific device to enable it to work at the levels required. Other special requirements of your system such as the ability to tie into the AMA/GTE Medical Information Network, or to be able to process and transmit paperless insurance claims should be included in your request for proposal even if you plan to purchase these services elsewhere. It is not important where you purchase these services, but that they will work on the computer configuration recommended by the vendor without interfering with your other operations. Summarize your applications request with a section on anticipated growth and expansion if not already covered in your practice profile.

Request for Proposal List

If you have a systems analysis you should have a request for proposal at least outlined in your report. If not, then it will be necessary to develop one. Although you could probably submit the information prepared to this point to the vendor for a bid you would probably not receive the proposal in a format suitable to conduct an ideal comparison. Therefore, it is recommended that the buyer prepare a detailed list of the equipment and the basic requirements of each software application. For example, every system will need a central processing unit (CPU) and memory. How many bits can the processor handle at a given moment? What is the minimum memory required for the system's operation to handle your special application and its maximum expansion. Figure 1 provides an example of the type of format and sample questions to ask.

When listing hardware include CPU, memory, bulk storage media, on-line storage, printers, terminals, communications desire, and the maintenance, supplies and training required.

Software applications should request general information such as programmed language; is it "user friendly" with menu formats and is the source code available to the buyer or are there provisions to provide access to the code should the vendor cease operations? Sample document output should be requested from the vendor as examples of the program's capability. Also ask the vendor to list maintenance costs for the software support plus a description of what the maintenance fee covers.

Requests for additional miscellaneous information on the cost of freight, installation, environmental considerations, anticipated increase in office utility cost and training (both off-site and in-house) should be included, as well as basic information on the vendor's experience in the medical field, the number of similar systems already installed and a list of references.

Once you have completed this information you will submit it to your list of prospective bidders. Although leasing is not as popular an alternative as has been the

FIGURE 1

Example of Detailed Request for Proposal List

HARDWARE

1. Manufacture_____ Model #_____
2. Central Processing Unit
 a. Memory Capacity: (kilobytes)
 Minimum Required _____ Maximum Available _____
 Size Operating System _____ Multi Tasking (Y/N) _____
 Maximum Simultaneous Jobs _____ Word Length 8, 16, 32, other
 b. Cost
 Purchase: Minimum Configuration ____ Additional Memory _____
 Lease: Minimum Configuration ____ Additional Memory _____
3. On Line Storage
 a. Type:
 Hard Disk _____ Tape ____ Floppy Diskettes_____ Other____
 Number of each that can be supported:
 b. Capacity (maximum millions of bytes)
 Hard Disk_____ Tape____ Floppy Diskettes_____ Other____
 c. Average Access Time
 Hard Disk (fixed): _____ (removable) _____
 Tape____ Floppy Diskettes_____ Other_____
 d. List each type and cost for device and controller. (Include number of devices supported on each controller)
4. Printer
 a. Type
 Letter Quality_____ Dot Matrix____ Lineprinter_____
 b. Speed (specify either char/sec or lines/min)
 Letter Quality_____ Dot Matrix_____ Lineprinter____
 c. Attach printer specifications to proposal (include information on maximum paper size, type of feed, support equipment, Ex: stand or cabinet needed to hold it)
 d. Cost (per unit)
 Purchase: Letter Quality_____ Dot Matrix_____ Lineprinter____
 Lease: _____ _____ ____
 Maintenance: _____ _____ ____
5. Terminals (add additional models on separate sheet)
 a. Characteristics Model_____
 (1) Screen Size_____ Screen Color_____
 (2) Keyboard: Standard____ Numeric Keypad_____
 (3) Options: Printer Port_____ Advanced Screen Format_____
 (4) Speed: Transmit_____ Receive_____
 (5) Remote Capabilities____ Graphic Capabilities____
 (You may wish to repeat this terminal paragraph several times to enable the vendor to list the different types available.)
 b. Cost (per unit)
 Purchase__ Lease_____ Maintenance (per month)_____
 Include section on supplies, training and installation.

SOFTWARE

	Application Name	Available	Program Name	Program Language	Cost
1.	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____

2. Maintenance

Type	Services Provided	Cost
_____	_____	_____
_____	_____	_____

FIGURE 2

Request for Proposal
Short Version

Vendor's Name

	Cost Purchase	Lease (per month)	Minimum Duration of Lease (months)
1. Hardware			
CPU	_____	_____	_____
On Line Storage	_____	_____	_____
Printer(s) No.____	_____	_____	_____
Terminal(s) no.___	_____	_____	_____
Communications	_____	_____	_____
Total Cost of Hardware	_____	_____	_____
2. Hardware Maintenance			
Types of Service	_____	_____	_____
1. Self	_____	_____	_____
2. Partial	_____	_____	_____
3. Full	_____	_____	_____
3. Average Monthly Supplies	_____	_____	_____
4. Training (no. days ___)	_____	_____	_____
5. Combined Software	_____	_____	_____
6. Software Maintenance	(same as for hardware)		
7. Misc. Expenses			
Freight	_____	_____	_____
Shipping Insurance	_____	_____	_____
Environmental Modifications	_____	_____	_____
7. Other	_____	_____	_____
9. Total Cost of Computer	_____	_____	_____

case in the past, the request should not only include the purchase price, but also the lease price per month plus a minimum duration of the lease.

Upon receipt of your bids, prepare a comparisoin chart similar to the one displayed in Figure 2. This can be used to summarize each bid and thus provide an effective tool to use in your comparison and evaluations.

Should the bids differ substantially from what you expected to be the system configuration or that of your computer consultant then request the bid again except this time ask them to bid on the system you specifically have listed with the software applications desired. Some vendors may try to undersell the system in order to remain competitive or to make the sale. Conversely, some may try to oversell but this is more rare now due to the selective and economical purchasing most buyers adhere to.

In summary, detail your request for proposal as much as possible but in a format that can be easily understood by the vendor. These documents and the bids for proposal will be the foundation of a contract for the purchase or lease of your future system. Take the time to do it right.

This is the fifth in a series of articles by Joe Witherington, Jr., System Manager for KMA and KMIC.

BRIEF SUMMARY
PRODCARDIA® CAPSULES For Oral Use
(nifedipine)
INDICATIONS AND USAGE: I. Vasospastic Angina: PROCARDIA (nifedipine) is indicated for the management of vasospastic angina confirmed by any of the following criteria: 1) classical pattern of angina at rest accompanied by ST segment elevation, 2) angina or coronary artery spasm provoked by ergonovine, or 3) angiographically demonstrated coronary artery spasm. In those patients who have had angiography, the presence of significant fixed obstructive disease is not incompatible with the diagnosis of vasospastic angina, provided that the above criteria are satisfied. PRDCARDIA may also be used where the clinical presentation suggests a possible vasospastic component but where vasospasm has not been confirmed, e.g., where pain has a variable threshold on exertion or in unstable angina where electrocardiographic findings are compatible with intermittent vasospasm, or when angina is refractory to nitrates and/or adequate doses of beta blockers.
II. Chronic Stable Angina (Classical Effort-Associated Angina): PRDCARDIA is indicated for the management of chronic stable angina (effort-associated angina) without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or organic nitrates or who cannot tolerate those agents.
In chronic stable angina (effort-associated angina) PRDCARDIA has been effective in controlled trials of up to eight weeks duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in those patients are incomplete.
Controlled studies in small numbers of patients suggest concomitant use of PRDCARDIA and beta blocking agents may be beneficial in patients with chronic stable angina, but available information is not sufficient to predict with confidence the effects of concurrent treatment, especially in patients with compromised left ventricular function or cardiac conduction abnormalities. When introducing such concomitant therapy, care must be taken to monitor blood pressure closely since severe hypotension can occur from the combined effects of the drugs. (See Warnings.)
CONTRAINDICATIONS: Known hypersensitivity reaction to PROCARDIA.
WARNINGS: Excessive Hypotension: Although in most patients, the hypotensive effect of PRDCARDIA is modest and well tolerated, occasional patients have had excessive and poorly tolerated hypotension. These responses have usually occurred during initial titration or at the time of subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta blockers.
Severe hypotension and/or increased fluid volume requirements have been reported in patients receiving PRDCARDIA together with a beta blocking agent who underwent coronary artery bypass surgery using high dose fentanyl anesthesia. The interaction with high dose fentanyl appears to be due to the combination of PROCARDIA and a beta blocker, but the possibility that it may occur with PRDCARDIA alone, with low doses of fentanyl, in other surgical procedures, or with other narcotic analgesics cannot be ruled out.
Increased Angina: Occasional patients have developed well documented increased frequency, duration or severity of angina on starting PROCARDIA or at the time of dosage increases. The mechanism of this response is not established but could result from decreased coronary perfusion associated with decreased diastolic pressure with increased heart rate, or from increased demand resulting from increased heart rate alone.
Beta Blocker Withdrawal: Patients recently withdrawn from beta blockers may develop a withdrawal syndrome with increased angina, probably related to increased sensitivity to catecholamines. Initiation of PROCARDIA treatment will not prevent this occurrence and might be expected to exacerbate it by provoking reflex catecholamine release. There have been occasional reports of increased angina in a setting of beta blocker withdrawal and PROCARDIA initiation. It is important to taper beta blockers if possible, rather than stopping them abruptly before beginning PROCARDIA.
Congestive Heart Failure: Rarely, patients, usually receiving a beta blocker, have developed heart failure after beginning PRDCARDIA. Patients with tight aortic stenosis may be at greater risk for such an event.
PRECAUTIONS: General: Hypotension: Because PROCARDIA decreases peripheral vascular resistance, careful monitoring of blood pressure during the initial administration and titration of PRDCARDIA is suggested. Close observation is especially recommended for patients already taking medications that are known to lower blood pressure. (See Warnings.)
Peripheral edema: Mild to moderate peripheral edema, typically associated with arterial vasodilation and not due to left ventricular dysfunction, occurs in about one in ten patients treated with PRDCARDIA. This edema occurs primarily in the lower extremities and usually responds to diuretic therapy. With patients whose angina is complicated by congestive heart failure, care should be taken to differentiate this peripheral edema from the effects of increasing left ventricular dysfunction.
Drug interactions: Beta-adrenergic blocking agents: (See Indications and Warnings.) Experience in over 1400 patients in a non-comparative clinical trial has shown that concomitant administration of PROCARDIA and beta-blocking agents is usually well tolerated, but there have been occasional literature reports suggesting that the combination may increase the likelihood of congestive heart failure, severe hypotension or exacerbation of angina.
Long-acting nitrates: PROCARDIA may be safely co-administered with nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
Digitalis: Administration of PRDCARDIA with digoxin increased digoxin levels in nine of twelve normal volunteers. The average increase was 45%. Another investigator found no increase in digoxin levels in thirteen patients with coronary artery disease. In an uncontrolled study of over two hundred patients with congestive heart failure during which digoxin blood levels were not measured, digitalis toxicity was not observed. Since there have been isolated reports of patients with elevated digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing PRDCARDIA to avoid possible over- or under-digitalization.
Carcinogenesis, mutagenesis, impairment of fertility: When given to rats prior to mating, nifedipine caused reduced fertility at a dose approximately 30 times the maximum recommended human dose.
Pregnancy: Category C. Please see full prescribing information with reference to teratogenicity in rats, embryotoxicity in rats, mice and rabbits, and abnormalities in monkeys.
ADVERSE REACTIONS: The most common adverse events include dizziness or light-headedness, peripheral edema, nausea, weakness, headache and flushing each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%. Syncopal episodes did not recur with reduction in the dose of PROCARDIA or concomitant antianginal medication. Additionally, the following have been reported: muscle cramps, nervousness, dyspnea, nasal and chest congestion, diarrhea, constipation, inflammation, joint stiffness, shakiness, sleep disturbances, blurred vision, difficulties in balance, dermatitis, pruritus, urticaria, fever, sweating, chills, and sexual difficulties. Very rarely, introduction of PROCARDIA therapy was associated with an increase in anginal pain, possibly due to associated hypotension.
In addition, more serious adverse events were observed, not readily distinguishable from the natural history of the disease in these patients. It remains possible, however, that some or many of these events were drug related. Myocardial infarction occurred in about 4% of patients and congestive heart failure or pulmonary edema in about 2%. Ventricular arrhythmias or conduction disturbances each occurred in fewer than 0.5% of patients.
Laboratory Tests: Rare, mild to moderate, transient elevations of enzymes such as alkaline phosphatase, CPK, LDH, SGDT, and SGPT have been noted, and a single incident of significantly elevated transaminases and alkaline phosphatase was seen in a patient with a history of gall bladder disease after about eleven months of nifedipine therapy. The relationship to PROCARDIA therapy is uncertain. These laboratory abnormalities have rarely been associated with clinical symptoms. Cholestasis, possibly due to PRDCARDIA therapy, has been reported twice in the extensive world literature.
HOW SUPPLIED: Each orange, soft gelatin PRDCARDIA CAPSULE contains 10 mg of nifedipine. PROCARDIA CAPSULES are supplied in bottles of 100 (NDC 0069-2600-66), 300 (NDC 0069-2600-72), and unit dose (10x10) (NDC 0069-2600-41). The capsules should be protected from light and moisture and stored at controlled room temperature 59° to 77°F (15° to 25°C) in the manufacturer's original container.
More detailed professional information available on request.

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"I can do things that I couldn't do for 3 yrs. including joining the human race again."



Quotes from an unsolicited letter received by Pfizer from an angina patient. While this patient's experience is representative of many unsolicited comments received, not all patients will respond to Procardia nor will they all respond to the same degree.

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"My daily routine consisted of sitting in my chair trying to stay alive."

"My doctor switched me to PROCARDIA[*] *as soon as it became available. The change in my condition is remarkable."*

"I shop, cook and can plant flowers again."

"I have been able to do volunteer work...and feel needed and useful once again."

PROCARDIA can mean the return to a more normal life for your patients—having fewer anginal attacks,[1] taking fewer nitroglycerin tablets,[2] doing more, and being more productive once again.

Side effects are usually mild (most frequently reported are dizziness or lightheadedness, peripheral edema, nausea, weakness, headache and flushing, each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%).



for the varied faces of angina

PROCARDIA®
(NIFEDIPINE) *Capsules 10 mg*

*Procardia is indicated for the management of:
1) Confirmed vasospastic angina.
2) Angina where the clinical presentation suggests a possible vasospastic component.
3) Chronic stable angina without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or nitrates or who cannot tolerate these agents. In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks' duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.

Please see PROCARDIA *brief summary on adjoining page*

Motrin®
ibuprofen, Upjohn
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Auxiliary



Celebrate Health . . . what better theme to promote as we start our 61st year as an Auxiliary to the Kentucky Medical Association. In the strictest sense of the meaning of the two words, we need to Proclaim, to Praise publicly the well being of ourselves and those around us, and to have a good time doing it. Now it only follows that in order to Celebrate Health we have to assure that all people around us are in that state of well being and freedom of disease. One of our goals is to promote the health and quality of all people.

This, of course, is not totally attainable, but it has to remain as our goal. This has been our goal for 60 years. Our past accomplishments continually speak for the present, and we as an Auxiliary can certainly celebrate what our membership has accomplished over the years. We need only to look back over the last 10 years to get some idea of those accomplishments. Our membership has basically remained the same with a high of just over 1500 members. Because of the needs of our membership and our federation with our national and component auxiliaries, we have changed our name, our fiscal year, and our annual convention time. Over the last 10 years we have trippled our annual fund raising for AMA-ERF, contributing over $34,000 this past year. We have had an average of six to seven students of allied health in school each year with the aid of our Health Careers Loan Fund. As a state organization we have promoted such projects as the Phoenix Project, the International Book Project, McDowell House, and numerous other areas under the Shape Up For Life Program. Our component Auxiliaries have initiated and supported far too many programs to list.

Our work will continue on as we function as an Auxiliary team involving Members-At-Large, local component auxiliaries, our state organization and our national organization. In addition to supporting our continuing programs of AMA-ERF, CPR, upkeep of the McDowell House and legislation, we will renew our emphasis on our goal of promoting health education. Our Shape Up For Life Program emphasis this year will concentrate on the child and the young adult. We will promote programs that increase awareness of child abuse, alcohol abuse, substance abuse, and safety on the streets for this age group and the other age groups where they apply. We will remember our elderly in our communities by promoting exercise programs within the nursing home setting and by promoting drug usage education. In accordance with our goal of supporting health related, charitable endeavors, we will promote fund raising for the Ronald McDonald Houses that are to be started in Lexington and Louisville. We will continue to cultivate friendly relations and promote mutual understanding among physician's families.

With the commitment of our membership, the hoped for involvement of new members, and the cooperation of other volunteer health care organizations, we can again have a reason to Celebrate Health as we begin our 62nd year this time a year from now.

Mary Veurink
President AKMA

Breast and Vaginal Reconstruction

John B. McCraw, M.D.



Breast and vaginal reconstruction are now reliable and accepted reconstructive procedures. Our capabilities to reconstruct these difficult deformities have been enhanced by the availability of myocutaneous flaps. Most vaginal reconstructions are carried out immediately at the time of radical pelvic exenteration and dramatically improve the healing with a secondary benefit of a return to an acceptable level of sexual function. Most breast reconstructions are carried out in a delayed fashion, one to two years following mastectomy, so that the surgeon and the oncologist can feel secure about the status of the disease. With the modified radical mastectomy the breast can be reconstructed with subpectoral placement of an implant, but in the case of the radical mastectomy it is generally preferable to replace the lost tissue with either the latissimus dorsi or the rectus abdominis myocutaneous flap. The anatomical and psychological results are presented.

KMA Annual Meeting
Sept. 19-22, 1983
Ramada Inn/Bluegrass Convention Center, Louisville

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MAXIGESIC capsules provide excellent relief of acute pain with predictable patient response. Potent, but without aspirin complications. Each capsule contains the analgesics Codeine 32mg and Acetaminophen 325mg plus 6.25mg of Promethazine to help relieve the anxiety and tension often accompanying pain. MAXIGESIC C-III status permits telephoned prescriptions and authorizes refills up to 5 times in 6 months (unless restricted by state law).

CONTRAINDICATIONS: Hypersensitivity to Codeine-containing preparations, the potential for abuse and dependence may occur. Administration is not recommended over an extended period. In ambulatory patients, Codeine may impair mental and/or physical abilities.

Interaction with other CNS depressants (anesthetics, tranquilizers, sedatives) may exhibit additive CNS depression.

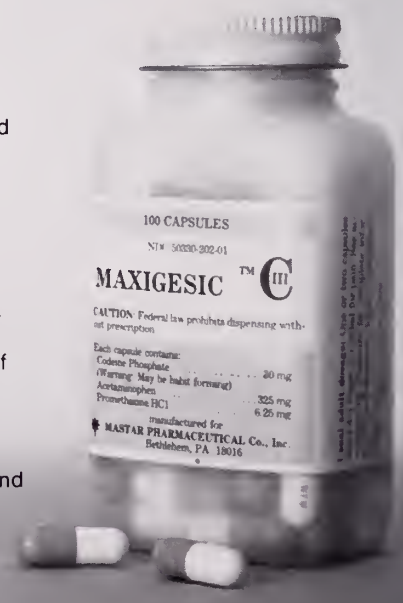
Usage in Pregnancy: Safe use has not been established in pregnant women.

Pediatric Use: Should not be administered to children under 12.

PRECAUTIONS: Increased cranial pressure may occur in presence of head injury. Promethazine should be administered cautiously to patients with cardio-vascular or liver disease. Acute abdominal conditions may be obscured. The drug should be given with caution to the elderly or debilitated, and those with severe impairment of hepatic and renal function, hyperthyroidism, Addison's disease and protatic hypertrophy or urethral stricture.

ADVERSE REACTIONS: The most frequently observed reactions include dizziness, lightheadedness, sedation nausea, vomiting and constipation.

DOSAGE AND ADMINISTRATION: Dosage should be adjusted to severity of pain, and the response of the patient. The usual dose is in one or two capsules every 4 to 6 hours as required.



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Adolescent Sexuality—Epidemiology and Risks

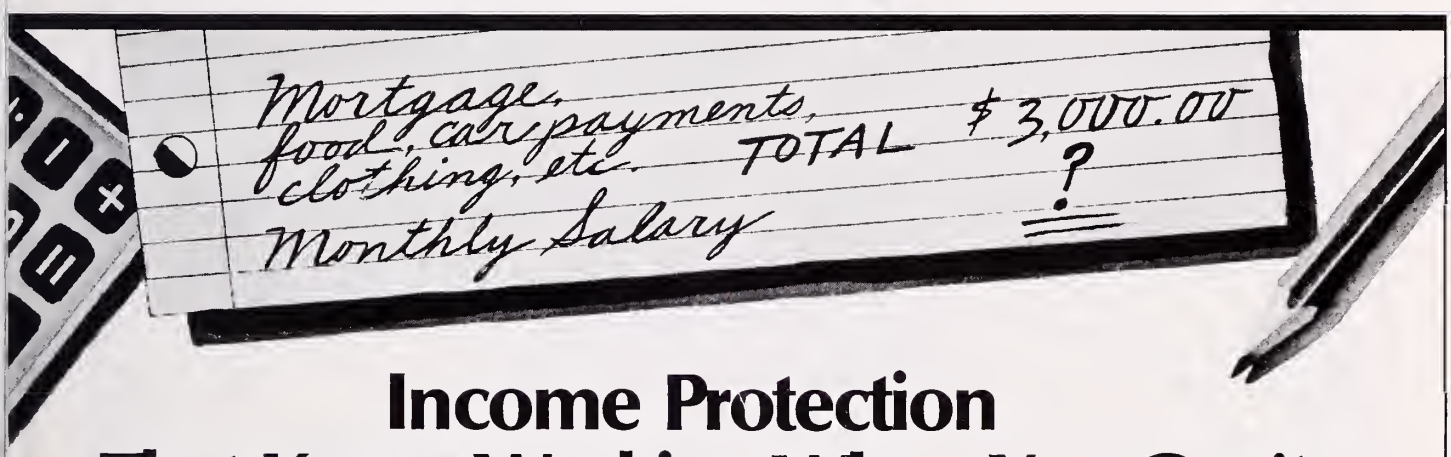
Richard R. Brookman, M.D.



Every year, a larger percent of American teenagers are experiencing a greater variety of intimate sexual behaviors with onset at increasingly younger ages. The interaction of physical and psychosocial developmental processes with familial, social and cultural influences may produce a situation of high risk, not only for sexual intimacy, but for significant medical and/or psychological consequences.

This presentation will review recent data on adolescent psychosexual development, sexual behavior, possible etiologic factors, and potential consequences, including teenage pregnancy and parenthood, sexually transmitted infections, and the increased risk for infertility and/or genital malignancy.

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1983 KMA ANNUAL MEETING

September 20, 21 & 22

Ramada Inn/Bluegrass Convention Center
Louisville, Kentucky

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Louisville, Kentucky 40207
(502) 895-5501

Lexington Office
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Suite 103B, 152 East Reynolds Road
Lexington, Kentucky 40503
(606) 272-9124

Postgraduate Page

JUNE

2-3 Genetic Aspects of Common Genetic and Malformation Disorders, Hyatt Regency Hotel, Lexington

2-4 1st Symposium on Behavioral Neurology: Higher Cortical Functions and the Brain, Vanderbilt University School of Medicine, Nashville, TN

8-10 12th Update in OB-GYN, Hyatt Regency Hotel, Lexington

8-10 Eighth Annual Conference on Clinical Application of Hyperbaric Oxygen, Memorial Hospital Medical Center, Center for Health education, Long Beach, California

9-10 Southern Medical Association, Medical Malpractice Seminar, Houston, Texas

16-17 Southern Medical Association, Medical Staff Leadership Seminar, Kansas City, Missouri

17 Problem Solving in Cardiovascular Disease for the Primary Care Physician, University of Louisville, Health Sciences Center

19-20 Long Island Jewish-Hillside Medical Center, VASCULAR SURGERY 1983, Current Status of the Art (International Vascular Symposium), The New York Hilton at Rockefeller Center, New York, NY

JULY

19-23 Vanderbilt University, Sixth Annual Symposium on Contemporary Clinical Neurology, Hilton Head Island, SC

AUGUST

5-6 Bethesda Hospital and Deaconess Association, Second Annual Hands-On Anterior/Posterior Vitrectomy Workshop, The Terrace Hilton Hotel, Cincinnati, OH

17-21 American Professional Practice Association, Timely Economic & Tax Savings Seminar for Doctors, Walt Disney World, Florida

19-21 Southern Medical Association, Regional Postgraduate Conferences, San Antonio, Texas

26-28 Southern Medical Association, Medical Malpractice Seminar, Hot Springs, Virginia

SEPTEMBER

7-10 13th Annual Peripheral Vascular Disease Symposium, University Hilton Inn, Columbus, OH

19-22 KMA Annual Meeting, Ramada Inn/Bluegrass Convention Center, Louisville

OCTOBER

8-16 Eighth Annual International Body Imaging Conference, Maui Surf Hotel, Maui, Hawaii

13-14 Southern Medical Association, Medical Malpractice Seminar, Washington, D.C.

NOVEMBER

4-5 Bethesda Hospital and Deaconess Association, Cincinnati Cancer Conference: G. I. Malignancies, The Westin Hotel, Cincinnati, OH

6-9 Southern Medical Association, Regional Postgraduate Conferences, Baltimore, Maryland

6-9 Southern Medical Association, Annual Scientific Assembly, Baltimore, Maryland

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Journal of the Kentucky Medical Association

3532 Ephraim McDowell Drive

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The Journal of KMA
3532 Ephraim McDowell Drive
Louisville, Kentucky 40205

MEDICAL OPPORTUNITIES

FAMILY PRACTITIONER needs an associate. Large established practice in a pleasant rural area near Rough River. 45 bed hospital. Write or call J. G. Sills, M.D., Hardinsburg, KY 40143 502-756-2178.

WANTED-FAMILY PHYSICIAN to join 2 physician family practice in Western Kentucky town of 8,000. Fully equipped modern office located next to 60 bed hospital. Send resume to: Ralph Cash, Jr., M.D., P. O. Box 627, Princeton, KY, 42445.

BEREA, KY, Opening July 1, 1983 for full-time orthopedic surgeon, Berea Hospital, Inc., P. O. Box 128, Berea 40403. Phone (606) 986-3151. Contact David E. Burgio, Administrator or Dwight L. Blackburn, M.D., Chief of Staff.

SALE OR LEASE

FOR SALE: 23 acres in 4 tracts or as a whole. Located on Taylorsville Lake adjoining the Corps of Engineers property line. For information call: 502-864-3182 (day).

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EQUIPMENT for sale: 1 Techa TE-4 electromygraph. 2 AA6 amplifiers. 1 NSG stimulator. 1 S6 simulator. 1 ER 401-A two channel tape recorder. 2 PAC2 preamplifiers strobe. 1 foot switch. 1 hand switch. 1 high speed direct recorder, reconditioned in 1981, $3,200. 134 new Grass needle electrodes, $100. 110 Beckman discolectrodes, new, $100. 2 Colloden air compressors with accessories, $50 each. 1 Recordicall, rarely used, $75. For more information, call (606) 437-4095, or toll free, (800) 354-7904.

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MEMBERSHIP DIRECTORY

Kentucky Medical Association 1983-1984 Membership Directory as of May 1, 1983

Listed in alphabetical order by county medical society and by name.

The directory includes:

Name
Spouse
Office Address
Office Phone
Home Address
Home Phone
Specialty code, medical school, year graduated

Every effort was made to provide accurate listing. Member information has been reported to the Society by each individual physician listed. This information has not been verified with any other source. It is intended only for use in this directory and does not indicate specialty board certification or eligibility.

In the event of inaccuracies members are asked to fill out the form below and return it to KMA Membership Records Dept.

To: Kentucky Medical Association, Membership Records Dept.
3532 Ephraim McDowell Drive, Louisville, KY 40205

Please correct my listing in the 1983-84 Membership Directory as follows:

County Medical Society_____

Name_____ Spouse_____

Office Address_____ Office Phone_____

Home Address_____ Home Phone_____

Specialty_____

Medical School_____ Year_____

Speciality Code Key

IM Internal Medicine

SU Surgery

PD Pediatrics

OBG Obstetrics and/or Gynecology

OPH Ophthalmology

D Dermatology and/or Syphilology

P Psychiatry

U Urology

ORS Orthopedic Surgery

R Radiology

PATH Pathology

TS Thoracic Surgery

ANES Anesthesiology

PH Public Health

N Neurology

PRM Physical and/or Restorative Medicine

CRS Colon and Rectal Surgery

ENT Eye, Ear, Nose, and Throat

GP General Practice

OTO Otolarynogology

OM Occupation Medicine

NS Neurosurgery

C Cardiology

PUD Pulmonary Diseases

GE Gastroenterology

ADM Administrative Medicine

A Allergy

H Hematology

PS Plastic and/or Reconstructive Surgery

FP Family Practice

EM Emergency Medicine

U. S. Medical School Key

ALABAMA
0102 Medical College of Alabama, Birmingham
0104 Birmingham Medical College
0106 University of South Alabama, Mobile

ARIZONA
0201 University of Arizona College of Medicine, Tucson

ARKANSAS
0301 University of Arkansas School of Medicine, Little Rock
0302 College of Physicians and Surgeons, Little Rock

CALIFORNIA
0401 Cooper Medical College, San Francisco
0402 University of California School of Medicine, San Francisco
0404 California Eclectic Medical College, Los Angeles
0405 Hahnemann Medical College of the Pacific, San Francisco
0406 University of Southern California School of Medicine, Los Angeles
0407 College of Physicians and Surgeons of San Francisco
0408 Oakland College of Medicine and Surgery
0409 College of Physicians and Surgeons, Los Angeles
0411 Stanford University School of Medicine, Pal Alto
0412 Loma Linda University School of Medicine, Loma Linda, LA
0413 Pacific Medical College, Los Angeles
0414 University of California, Los Angeles, School of Medicine
0415 University of California, Irvine, California College of Medicine, Irvine
0418 University of California, San Diego School of Medicine, La Jolla
0419 University of California, School of Medicine, Davis
0475 College of Osteopathic Physicians and Surgeons of LA

COLORADO
0501 Denver College of Medicine
0502 University of Colorado School of Medicine, Denver
0503 Gross Medical College, Denver
0504 Denver College of Physicians and Surgeons
0505 Denver and Gross College of Medicine

CONNECTICUT
0601 Yale University School of Medicine, New Haven
0602 University of Connecticut School of Medicine, Farmington

DISTRICT OF COLUMBIA
0801 George Washington University School of Medicine
0802 Georgetown University School of Medicine
0803 Howard University School of Medicine

FLORIDA
0902 University of Miami School of Medicine
0903 University of Florida College of Medicine, Gainesville

Medical School Key

0904 University af Southern Florida, School af Medicine, Tampa
0905 Basic Medical Sciences Program, Florida State University, Talahassee

GEORGIA
1001 Medical College of Georgia, Augusta
1005 Emory University School of Medicine, Atlanta
1009 Georgia College of Eclectic Medicine and Surgery, Atlanta
1010 Sauthern Medical Callege, Atlanta
1011 Atlanta Callege af Physicians and Surgeans
1012 Atlanta School af Medicine
1018 Haspital Medical College Eclectic, Atlanta
1019 Southern College of Medicine and Surgery, Atlanta

HAWAII
5201 University af Hawaii Schaal af Medicine, Honolulu

ILLINOIS
1201 Rush Medical College, Chicago
1202 University of Chicago, Pritzker School of Medicine
1204 Hahnemann Medical College and Hospital, Chicaga
1205 College of Medicine and Surgery, Chicago
1206 Northwestern University Medical School, Chicago
1208 Bennett Medical College, Chicaga
1209 Northwestern University Womans Medical School, Chicaga
1210 Chicago Homeopathic Medical Callege
1211 University of Illinais Callege of Medicine, Chicago
1213 Harvey Medical College, Chicaga
1214 Natianal Medical University, Chicago
1215 Hering Medical College, Chicaga
1216 Jenner Medical College, Chicago
1217 Illinais Medical College, Chicago
1218 Dunham Medical College, Chicago
1219 American Medical Missionary College, Battle Creek, Michigan and Chicaga
1222 Chicago Callege af Medicine and Surgery
1239 Dearborn Medical Callege, Chicago
1242 Chicago Medical School
1243 Loyala University, Stritch School of Medicine, Maywoad
1244 The General Medical College, Chicago
1245 Sauthern Illinois University School of Medicine, Springfield
1276 Chicaga College of Osteapathy

INDIANA
1305 Physialogical Medical College of Indiana, Indianapolis
1308 Medical College of Indiana, Indianapolis
1309 Central Callege af Physicians and Surgeons, Indianapalis
1310 Fort Wayne College af Medicine
1317 Eclectic Medical Callege af Indiana, Indianapalis
1318 Indiana Medical College, School of Medicine af Purdue Univ., Indianapalis
1320 Indiana University Schaal af Medicine, Indianapolis
1327 University af Medicine, Indianapalis

IOWA
1401 Callege af Physicians and Surgeans, Keokuk
1403 University af Iowa College of Medicine, Iowa City
1404 State University af Iowa College of Homeapathic Medicine, Iowa City
1406 Drake University College af Medicine, Des Moines
1408 Sioux City Callege af Medicine
1409 Keakuk Medical College
1410 Keakuk Medical College, Callege af Physicians and Surgeans
1475 College of Osteopathic Medicine and Surgery, Des Maines

KANSAS
1502 University of Kansas School of Medicine, Lawrence, Kansas City
1503 Kansas Medical College, Topeka
1504 College of Physicians and Surgeons, Kansas City
1507 Western Eclectic Callege of Medicine and Surgery, Kansas City

KENTUCKY
1601 Kentucky School of Medicine, Lauisville
1602 University of Louisville School af Medicine
1604 Lauisville Medical College
1605 Hospital College of Medicine, Louisville
1607 Lauisville National Medical College
1608 Sauthwestern Hameapathic Medical Callege and Haspital, Louisville
1609 Kentucky University Medical Department, Louisville
1611 Louisville and Hospital Medical College
1612 University af Kentucky Callege af Medicine, Lexington

LOUISIANA
1701 Tulane University School af Medicine, New Orleans
1704 Flint Medical College af New Orleans University, New Orleans
1705 Louisiana State University School of Medicine, New Orleans
1706 Louisiana State University Medical Center, Shrevepart

MAINE
1801 Bowdain Medical Schaal, Brunswick-Portland

MARYLAND
1901 University af Maryland School of Medicine, Baltimare
1903 College of Physicians and Surgeons of Baltimore
1904 Baltimore Medical College
1905 Womans Medical College of Baltimore
1906 Baltimare University School of Medicine
1907 Johns Hapkins University School of Medicine, Baltimore
1908 Atlantic Medical Callege, Baltimore
1909 Maryland Medical College, Baltimore
1911 Maryland College of Eclectic Medicine and Surgery, Baltimare

MASSACHUSETTS
2001 Harvard Medical School, Boston
2005 Bastan University School of Medicine
2006 College of Physicians and Surgeons, Baston
2007 Tufts University School of Medicine, Boston
2015 Middlesex University School of Medicine, Waltham
2016 University af Massachusetts Schaal af Medicine, Worcester
2075 Massachusetts College of Osteopathy Extinct, Boston

MICHIGAN
2101 University of Michigan Medical Schaal, Ann Arbor
2105 University of Michigan Homeopathic Medical School, Ann Arbar
2107 Wayne State University School of Medicine, Detroit
2108 Michigan Callege of Medicine and Surgery, Detroit
2109 Saginaw Valley Medical College, Saginaw
2110 Grand Rapids Medical College

Medical School Key

2111 Detroit Hameopathic College
2112 Michigan State University College of Human Medicine, East Lansing

MINNESOTA
2204 University of Minnesota Medical School, Minneapalis
2205 Minneapolis College of Physicians and Surgeans
2206 University of Minnesota College of Hameopathic Medicine & Surgery, Minneapolis
2207 University of Minnesota Duluth Medical Education Program, Duluth
2208 Maya Medical School, Mayo Foundation, Rochester

MISSISSIPPI
2301 University of Mississippi School af Medicine, Jackson
2302 Mississippi Medical College, Meridian

MISSOURI
2401 Missouri Medical Callege, St. Louis
2402 Washington University Schaal of Medicine, St. Lauis
2403 University of Missouri School of Medicine, Columbia
2405 Homeopathic Medical College of Missouri, St. Louis
2407 St. Louis College of Physicians and Surgeons
2408 Kansas City Medical College
2410 National University of Arts and Sciences Medical Department, St. Lauis
2420 University Medical College of Kansas City
2422 Ensworth Medical College, St. Joseph
2424 Beaumont Hospital Medical College, St. Louis
2426 Kansas City Homeopathic Medical College
2427 Marion-Sims College of Medicine, St. Louis
2428 Barnes Medical College, St. Lauis
2429 Central Medical Callege of St. Jaseph
2430 Womans Medical College, Kansas City
2431 Hahnemann Medical College af Kansas City University, Kansas City
2432 Medical Chirurgical College of Kansas City
2433 Eclectic Medical University, Kansas City
2434 St. Louis University Schoal af Medicine, St. Louis
2435 Southwest School of Medicine and Hospital, Kansas City
2443 Kansas City College of Medicine and Surgery
2444 Kansas City University of Physicians and Surgeons
2445 Mid West Medical College, Kansas City
2446 University of Missouri, Kansas City Schaal of Medicine, Kansas City
2478 Kansas City College of Osteopathy and Surgery, Kansas City
2479 Kirksville Callege of Osteopathy and Surgery, Kirksville

NEBRASKA
2604 Lincaln Medical College, Eclectic, Lincoln
2405 University of Nebraska College of Medicine, Omaha
2406 Creighton University School of Medicine, Omaha
2407 Nebraska College of Medicine, Lincaln

NEVADA
2701 University of Nevada School af Medical Sciences, Reno

NEW HAMPSHIRE
2801 Dartmouth Medical Schoal, Hanaver

NEW JERSEY
2905 CMDNJ, New Jersey Medical School, Newark
2906 CMDNJ, Rutgers Medical Schoal, Piscataway

NEW MEXICO
3001 University af New Mexico School af Medicine, Albuquerque

NEW YORK
3101 Columbia University College of Physicians and Surgeans, New York
3103 Albany Medical College of Union University, Albany
3105 New Yark University Medical College, New York
3106 State University of New York at Buffala
3108 State University af New York at Brooklyn (Downstate)
3109 New York Medical College, New York
3110 Bellevue Haspital Medical Callege, New Yark
3111 New Yark Medical College and Hospital for Women, New York
3113 Eclectic Medical College of the City af New Yark
3115 State University of New Yark at Syracuse (Upstate)
3119 New York University School of Medicine, New York
3120 Cornell University School of Medicine, New Yark
3143 Fordham University School of Medicine, New York
3145 University of Rochester School of Medicine & Dentistry
3146 Albert Einstein College of Medicine af Yeshiva Univ., New York
3147 Mount Sinai Schaal of Medicine of the City University of New York
3148 State University at Stony Brook Medical School

NORTH CAROLINA
3201 University of North Carolina Schaal af Medicine, Chapel Hill
3203 Leonard Medical School, Raleigh
3204 North Carolina Medical College, Charlotte
3205 Bawman Gray Schaal of Medicine of Wake Farest Univ., Winston-Salem
3207 Duke University School af Medicine, Durham
3208 East Carolina University School of Medicine, Greenville

NORTH DAKOTA
3301 University of North Dakota School of Medicine, Grand Farks

OHIO
3401 Medical College of Ohia, Cincinnati
3402 Eclectic Medical College, Cincinnati
3403 Starling Medical College, Columbus
3406 Case Western Reserve University School of Medicine, Cleveland
3407 Cleveland University of Medicine and Surgery
3408 Cincinnati College of Medicine and Surgery
3409 Miami Medical College, Cincinnati
3411 University of Wooster, Medical Department, Cleveland
3413 Pulte Medical College, Cincinnati
3419 Toledo Medical College
3421 Laura Memorial Womans Medical College, Cincinnati
3423 Cleveland Medical College, Homeopathic, Cleveland
3425 Ohio Medical University, Columbus
3426 Cleveland Pulte Medical College
3440 Ohio State University College of Medicine, Columbus
3441 University of Cincinnati College of Medicine
3442 Ohia State University College of Homeopathic Medicine, Columbus
3443 Medical College of Ohio at Taledo

Medical School Key

OKLAHOMA
3501 University of Oklohomo College of Medicine, Oklohomo City
3502 Epworth College of Medicine, Oklahoma City

OREGON
3601 Williomette University Medical Deportment, Solem
3602 University of Oregon Medical School, Portland

PENNSYLVANIA
3701 University of Pennsylvonio School of Medicine, Philodelphia
3702 Jefferson Medical College of Thomos Jefferson University, Philodelphia
3707 Medicol College of Pennsylvanio, Philodelphio
3709 Hohnemonn Medicol College of Philodelphio
3711 Medico-Chirurgicol College of Philodelphio
3712 University of Pittsburgh School of Medicine
3713 Temple University School of Medicine, Philodelphia
3714 Pennsylvania Stote University, Milton S. Hershey Medical Center, Hershey
3717 Philodelphio College of Osteopathic Medicine, Philodelphia

PUERTO RICO
5301 University of Puerto Rico School of Medicine, San Juon

RHODE ISLAND
3801 Brown University Division of Biological ond Medical Sciences, Providence

SOUTH CAROLINA
3901 Medicol University of South Corolino, Chorleston

SOUTH DAKOTA
4001 State University of South Dakoto School of Medicine, Vermillion

TENNESSEE
4101 University of Nashville, Medicol Deportment
4105 Vanderbilt University School of Medicine, Noshville
4106 University of Tennessee College of Medicine, Memphis
4107 Mehorry Medical College, Nashville
4108 Memphis Hospital Medical College
4109 Chottanooga Medical College
4110 Lincoln Memoriol University Medicol Department, Knoxville
4111 University of the South Medicol Department, Sewanee
4113 Knoxville Medicol College
4114 University of West Tennessee College of Medicine ond Surgery, Memphis
4115 College of Physicions and Surgeons, Memphis

TEXAS
4202 University of Texos Medical Branch, Galveston
4203 Fort Worth School of Medicine
4204 Boylor College of Medicine, Houston
4205 Physiologicol Medical College of Texos, Dollas
4206 Southern Methodist University Medicol Deportment, Dallos
4207 Gote City Medical College, Dallos
4208 College of Physicions ond Surgeons, Dallos
4210 Dollos Medical College
4212 University of Texos, Southwestern Medical School, Dollos
4213 University of Texas Medical School at San Antonio
4214 University of Texas Medicol School at Houston
4215 Texos Tech University School of Medicine, Lubbock

UTAH
4301 University of Utah College of Medicine, Solt Loke City

VERMONT
4402 University of Vermont College of Medicine, Burlington

VIRGINIA
4501 University of Virginia School of Medicine, Charlottesville
4504 Medicol College of Virginio, Health Sciences Division, Vo. Commonwealth Univ., Richmond
4506 University College of Medicine, Richmond
4507 Eastern Virginia Medical School, Norfolk

WASHINGTON
4604 University of Washington School of Medicine, Seattle
4615 Washington College of Physicians ond Surgeons, Seattle

WEST VIRGINIA
4701 West Virginio University, School of Medicine, Morgontown

WISCONSIN
4802 Wisconsin College of Physicions and Surgeons, Milwoukee
4803 Milwaukee Medicol College
4805 University of Wisconsin Medicol School, Modison
4806 Medicol College of Wisconsin, Milwaukee (Formerly Morquette)

Foreign Medical School Key

ARGENTINA
5101 Buenos Aires University Medical School
5102 Cordoba University Medical School

AUSTRIA
5201 Leopold-Franzens University
5202 University of Innsbruck Medical School
5203 University of Vienna

PUERTO RICO
5301 University of Puerto Rico School of Medicine

BANGLADESH
5401 Dacca University

BELGIUM
5501 University of Brussels
5502 University of Liege
5503 University of Louvain

BOLIVIA
5601 St. Simon's University

BRAZIL
5701 Recife Federal University

BULGARIA
5801 High Institute of Medicine, Sofia

CANADA
5901 University of Alberta
5902 University of British Columbia, Vancouver
5903 Dalhousie University, Nova Scotia
5904 McGill University, Montreal
5905 University of Montreal Medical School
5906 University of Western Ontario
5907 University of Ottawa
5908 University of Saskatchewan
5909 University of Toronto, Ontario

CHILE
6001 University of Chile Medical School

CHINA
6101 Hunan Medical School
6102 St. John's University Medical School
6103 National Defense Medical Center
6104 Taipei Medical College
6105 University of Taiwan

COLUMBIA
6201 University of Antioquia, Medellin
6202 University of Javeriana, Bogota
6203 University of DelValle
6204 National University
6205 Xavier University, Bogota

CUBA
6301 University of Havana School of Medicine

ECUADOR
6401 Central University of Quito
6402 University of Guayaquil School of Medicine

EGYPT
6501 Al-Azhar Faculty of Medicine, Cairo
6502 University of Cario School of Medicine

ENGLAND
6601 Bristol University
6602 University of Birmingham Medical School
6603 Guy's Hospital Medical School, London
6604 The London Hospital Medical College
6605 St. Mary's Hospital Medical School, London
6606 University College Hospital Medical School, London

FRANCE
6701 University of Paris Faculty of Medicine

GERMANY
6801 Ruperto Carola Heidelberg University
6802 University of Cologne
6803 J. W. Goethe University, Frankfurt
6804 University of Goettingen
6805 Johannes Gutenberg, Mainz
6806 University of Kiel Medical School
6807 University of Munich

HONDURAS
6901 Honduras Medical School

INDIA
7001 All India Institute of Medical Sciences
7002 Guntur Medical College, Andhra University
7003 Baroda Medical College
7004 B. J. Medical School, Ahmedabad
7005 Calicut Medical College
7006 Christian Medical College, Vellore
7007 Darbhanga Medical College
7008 Gajra Raja Medical College
7009 Glancy Medical College of Amritsar
7010 Grant Medical College
7011 G. S. Medical College, Bombay
7012 Goa Medical College
7013 Government Medical College, Nagpur
7014 Government Medical College, Patiala
7015 Government Medical College, Jabalpur
7016 Government Medical College, Srinagar
7017 Jipmer Institute, Pondicherry
7018 Kottayam Medical College
7019 J. N. Medical College, Belgaum
7020 Karnatak Medical College
7021 King George's Medical School, Lucknow
7022 Kurnool Medical College, Srivenkateswara University
7023 Madurai Medical College
7024 M. G. M. Medical College, University of Indore
7025 M. P. Shah Medical School, Jamnagar
7026 M. S. University of Baroda
7027 Mysore Medical College, Mysore City
7028 Osmania Medical College
7029 Punjab University
7030 P. W. Medical School, Patna
7031 R. G. Kar Medical School
7032 Seth G. S. Medical College
7033 St. John's Medical College
7034 Stanley Medical College
7035 University of Kerala, Trivandrum
7036 University of Madras
7037 Gandhi Medical School

Foreign Medical School Key

IRAN
7101 Shiraz
7102 University of Tehran School of Medicine

IRAQ
7201 University of Baghdad School of Medicine

IRELAND
7301 University of Dublin Medical School
7302 National University of Ireland
7303 Royal College of Surgeons
7304 Queens' University of Belfast

ITALY
7401 University of Milan
7402 University of Bologna

JAPAN
7501 Tokyo Jikei-Kai School of Medicine

KOREA
7601 Busan National University College of Medicine
7602 Chun-nam University Medical School
7603 Kyung Book University School of Medicine
7604 Seoul National University College of Medicine
7605 Severence Union Medical College
7606 University of Korea
7607 Women's University School of Medicine
7608 Yonsei University College of Medicine

LEBANON
7701 American University of Beirut

MALTA
7801 University of Malta

MEXICO
7901 University of Nuevo Leon
7902 National University of Mexico
7903 Autonomous University of Guadalajara

THE NETHERLANDS
8001 Amsterdam University
8002 University of Leiden Medical School

NEW ZEALAND
8101 Otuga University Medical School

NICARAGUA
8201 National University of Nicaragua

PAKISTAN
8301 Dow Medical College
8302 Khyber Medical College
8303 King Edward
8304 Liaquat Medical School
8305 Nishtar Medical College

PERU
8401 San Fernando Medical School
8402 University of San Marcos

PHILIPPINES
8501 Cebu Institute of Medicine
8502 Far Eastern University
8503 Southwestern University
8504 University of the East
8505 University of the Philippines College of Medicine
8506 Manila Central University
8507 University of Santo Tomas

PORTUGAL
8601 Lisbon Medical School

SCOTLAND
8701 Edinburgh University
8702 Glasgow University

SOUTH AFRICA
8801 University of Cape Town

SPAIN
8901 Central University of Madrid
8902 University of Seville
8903 University of Valencia
8904 Zaragoza Medical School

SWITZERLAND
9001 Basel University Medical School
9002 University of Geneva
9003 University of Lousanne
9004 University of Zurich

SYRIA
9101 Damascus University

THAILAND
9201 Chulalongkorn Medical School
9202 Mahidol University
9203 Ramathibodi Hospital School of Medicine

TURKEY
9301 University of Ankara
9302 University of Istanbul

UGANDA
9401 Makerere Medical School

UNITED KINGDOM
9501 Cambridge & Middlesex Hospital

YUGOSLAVIA
9601 University of Zagreb

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R 3717 75

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SU 3120 76

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FP 1602 73

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IM 8501 65

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502-384-3343
FP 1602 46

Munther, Antoine S.
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Russell Springs, 42642
Res. Rural Raute 1
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SU 72

Rogerson, Charles A.
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Ofc. Aaron Medical Center
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Res. Fairplay
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SU 9501 49

Salato, James C.
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Columbia, 42728
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GP 1602 46

ALLEN

Davis, Owen L.
Nadine M.
Ofc. P.O. Bax 506
Scattsville, 42164
Res. P.O. Bax 506
Scattsville, 42164
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GP 1602 50

Halcomb, Francis J.
Mariala S.
Ofc. 217 W. Main St.
Scattsville, 42164
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Res. RFD 1
Scottsville, 42164
502-237-3608
FP 1602 43

Hall, John M.
Dell S.
Ofc. 218 N. Caurt St.
Scattsville, 42164
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Res. Rt. 1 Bax 79
Scattsville, 42164
502-237-4245
FP 1602 60

Oliver, Earl P.
Margurette
Ofc. Rt. 1
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502-237-3144
Res. Gallatin Raad
Scattsville, 42164
502-237-3475
FP 1602 43

Smith, Curtis H.
Hazel B.
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Scattsville, 42164
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FP 1602 79

ANDERSON

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Res. 320 Sa. Main St.
Lawrenceburg, 40342
502-839-3066
GP 4105 46

McElwain, William P.
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Lawrenceburg, 40342
Res. Schalfield Lane
Frankfart, 40601
FP 1602 58

Wash, Lewis E.
Ofc. 236 Waadfard St. East
Lawrenceburg, 40342
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Res. U.S. 127
Lawrenceburg, 40342
FP 1602 58

BALLARD

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Bandana, 42022
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GP 301 49

Hunt, Jr., Jesse M.
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Ofc. Bax 215 Hwy #286 E.
Wickliffe, 42087
502-335-3199
Res. Hwy 286 East
Wickliffe, 42087
502-335-3199
GP 1602 49

BARREN

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Ofc. Community Medical Center
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502-651-6741
Res. 205 Narris Caurt
Glasgaw, 42141
502-651-3434
FP 1612 76

Bravo, Leticia A.
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Ofc. 1411 N. Jacksan Hwy. PSC
Glasgaw, 42141
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Res. 104 Maple
Glasgaw, 42141
678-1407
PD 8502 66

Bravo, Orlando E.
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Glasgow, 42141
Res. 104 Maple
Glasgaw, 42141
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OBG 8502 68

Bryant, William H.
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FP 1602 42

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Cave City, 42127
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FP 1701 68

Dickinson, John
Mildred
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Res. Maplewaad Place
Glasgaw, 42141
502-651-5211
SU 1602 33

Dickinson, Lewis
Selam G.
Ofc. 315 Sa. Green St.
Glasgaw, 42141
502-651-2123
Res. 321 W. Washingtan
Glasgaw, 42141
502-651-3211
IM 1602 42

Dickinson, Lewis G.
Sherry
Ofc. 315 Sa. Green St.
Glasgaw, 42141
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Res. 125 Cranbraak
Glasgaw, 42141
502-651-2410
IM 1602 71

Edgin, Howard L.
Ofc. Rt. #10 Bax 120
Glasgaw, 42141
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Res. Oil Well Raad
Glasgaw, 42141
502-651-3512
ANES 1602 70

Fant, Robert D.
Ofc. 204 Williams Ave.
Glasgaw, 42141
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Res. Raute 1, Ft. Run
Glasgaw, 42141
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FP 1602 76

Fornaris, Fernando P.
Carmen G.
Ofc. 219 Simmental Ln.
Glosgow, 42141
Res. 219 Simmentol Lane
Glosgow, 42141
502-651-8154
PUD 6301 41

Garst, Garland R.
Potricio J.
Ofc. 1212 So. Green St.
Glosgow, 42141
Res. 1212 South Green St.
Glosgow, 42141
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R 1602 60

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Noncy S.
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Glosgow, 42141
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Glosgow, 42141
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OBG 1602 68

Harvey, Daryl P.
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Res. Roseville Rd.
Glasgow, 42141
FP 1701 43

MacCarthy, Justin
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Res. Uncle Johns Ln.
Glosgow, 42141
SU 7302 56

Marion, Eugene L.
Janet A.
Ofc. 218 Columbio
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502-651-3839
Res. 303 Clevelond
Glasgow, 42141
502-651-5241
GP 1602 43

Marrs, William
Morio
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Res. 100 Rointree Pl.
Glosgow, 42141
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GP 1602 74

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PD 1602 46

McKinley, Carolyn H.
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PD 4105 50

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GP 1602 52

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Bhoroti B.
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Glosgow, 42141
502-651-2233
SU 7025 67

Mody, Bharati
Morgie
Ofc. Centrol Ave.
Glosgow, 42141
502-651-2133
Res. 1500 Centrol Ave.
Glosgow, 42141
502-651-2233
OBG 7004 68

Moss, Morris David
Sondro D.
Ofc. 1004 Glenview Dr.
Glosgow, 42141
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Res. 514 S. Green
Glosgow, 42141
502-651-5737
PD 1602 75

Moss, Sandra D.
Morris D.
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PD 1602 76

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P 6301 40

Peterson, Jr., Gilman P.
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Glosgow, 42141
SU 1612 74

Reddy, Narasimha
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Res. 1309 N. Rose St.
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ORS 7037 73

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Res. Fountain Squore
Glosgow, 42141
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GP 1602 74

Starr, Robert R.
Foye H.
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Glasgow, 42141
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FP 1602 43

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Mortho S.
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R 4106 70

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Mory Florence
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Res. Highlond Pork
Glosgow, 42141
502-651-5978
GP 4106 41

Whiteside, Jim H.
Mary
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Glosgow, 42141
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Res. 905 S. Green Street
Glosgow, 42141
502-651-5559
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Byron, Robin A.
Elizobeth H.
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Owingsville, 40360
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Res. 133 High
Owingsville, 40360
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FP 4105 39

BOYD

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Res. 801 Highland Ave.
Ashlond, 41101
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ORS 1602 52

Bailey, Herald K.
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Ashlond, 41101
Res. 1404 Montgomery Ave.
Ashlond, 41101
GP 1602 34

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SU 4105 71

Behnke, Ernest E.
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Ashlond, 41101
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OTO 903 71

Borst, III, George C.
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Res. 265 Bellefonte Circle
Ashlond, 41101
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IM 1612 75

Burgess, Clyde A.
Christine H.
Ofc. 6 The Ooks Dr.
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Res. 1718 Ooks Dr.
Ashlond, 41101
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FP 3441 61

Cawood, Walter L.
Ofc. 1200 Both Ave.
Ashlond, 41101
Res. 915 Edgewood Ave.
Ashlond, 41101
R 1602 46

Connelly, Edward W.
Ofc. 1415 Bath Ave. #5
Ashland, 41101
Res. 1739 Dysard Hill
Ashland, 41101
OBG 3702 42

Conner, William T.
Mary
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Ashland, 41101
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Res. 413 Cauntry Club Drive
Ashland, 41101
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U 4202 64

Craycraft, Larry B.
Rachel Z.
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Res. 4014 Sauthview Rd.
Ashland, 41101
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FP 4701 63

Cunningham, Guy C.
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Ofc. 2321 Lexingtan Ave.
Ashland, 41101
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Res. 2419 Lexingtan Ave.
Ashland, 41101
606-324-5437
PD 1602 46

Daniels, Charles Bishop
Ofc. 1207 Bath Ave.
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Res. 1207 Bath Ave.
Ashland, 41101
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GP 1602 30

Ditty, Jr., Jack F.
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Res. 107 Buena Vista Dr.
Ashland, 41101
D 1602 75

Duff, W. Rexford
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Res. 1504 Bath Ave.
Ashland, 41101
FP 3441 59

Ehrie, Jr., Michael G.
Jane Ray Ehrie
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PUD 1602 74

Evans, Evalyn G.
Ofc. 1205 Mantgamery
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PD 4106 58

Ford, Jerald M.
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OBG 1612 70

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Res. 5060 Rabin Haad
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Ashland, 41101
606-324-1702
GP 3441 39

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OPH 1602 53

Gwinn, Frank W.
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Ashland, 41101
IM 1602 42

Haeberle, Mark G.
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OBG 1612 71

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Res. 200 Bellefante Dr.
Ashland, 41101
OBG 1602 75

Harrison, John W.
Jaan
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Ashland, 41101
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GP 1602 61

Hauswald, Kenneth R.
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Ashland, 41101
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SU 3205 71

Holbrook, Paul E.
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IM 1602 38

Hollis, John W.
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OM 301 56

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IM 4501 43

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GP 1602 45

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U 4105 73

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SU 1602 60

Justice, Oren W.
Patricia H.
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Keeton, James M.
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SU 3441 42

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Res. 3829 Birnamwaad Dr.
Ashland, 41101
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PD 7009 69

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R 7601 71

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Res. 2212 Lexingtan Ave.
Ashland, 41101
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FP 1602 57

Kinney, Michael J.
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FP 1612 78

Kleykamp, Sr., Paul R.
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OM 4504 52

BOYD

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P 8503 64

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FP 1602 53

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Nancy Lovell
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Res. 2655 Forest Ave.
Ashland, 41101
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SU

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SU 1602 43

Martin, Herman E.
Ofc. 1520 Chestnut Dr.
Ashland, 41101
Res. 1520 Chestnut Dr.
Ashland, 41101
U 4504 31

Martin, Keith
Ruby
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Ashland, 41101
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Res. 105 Country Club Circle
Ashland, 41101
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R 1602 57

McAllister, Jr., Terrence
Allyson A.
Ofc. 25th and Center
Catlettsburg, 41129
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Res. 3312 Condit
Catlettsburg, 41129
606-329-8537
FP 1612 76

McKinney, Douglas E.
Sue
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Res. 1912 Lexington Ave.
Ashland, 41101
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U 4701 67

McWhorter, Howard B.
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Ashland, 41101
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C 1602 46

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OPH 2606 71

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Eloise
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Ashland, 41101
606-325-3726
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Fern
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Ashland, 41101
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SU 1602 34

Potter, John R.
Pam
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606-324-6181
Res. 506 Franklin Court
Ashland, 41101
606-324-5015
PD 1612 74

Prasher, Susan H.
Ofc. 2201 Lexington Ave.
Ashland, 41101
606-329-2133
Res. 1125 Forest Court
Ashland, 41101
606-329-8256
PATH 3440 77

Ray, Hugh L.
Polly
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Res. 1742 Dysard Hill
Ashland, 41101
606-324-8496
ANES 4106 50

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SU 1206 52

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Ashland, 41101
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C 3120 74

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Res. 2800 Jackson Ave.
Ashland, 41101
EM 6301 41

Rivas, Frank
Carole Marie
Ofc. 1314 Fifth Ave.
Huntington, WV, 25701
304-529-3223
Res. P.O. Box 9309
Huntington, WV, 53704
IM 5088 64

Robinson, Garner E.
Mildred Ann
Ofc. 700 13th St.
Ashland, 41101
606-324-6181
Res. 2507 Forest Ave.
Ashland, 41101
606-325-7212
PD 4106 61

Rogers, Charles R.
Ofc. P.O. Box 1282
Ashland, 41105
Res. 124 Sunset Dr.
Ashland, 41101
ANES 1602 67

Sanchez, Jose A.
Yolanda
Ofc. 500 St. Christopher Dr.
Ashland, 41101
606-836-3132
Res. 1152 Radford Court
Russell, 41169
606-836-6553
IM 6203 66

Sanford, Okey H.
Lila
Ofc. 2222 29th St.
Ashland, 41101
606-329-2600
Res. 2770 Peacock Road
Ashland, 41101
606-324-9388
FP 4701 63

Schnitzker, William F.
Bettylee E.
Ofc. 1200 Bath Ave.
Ashland, 41101
606-324-5164
Res. 1612 Lexington Ave.
Ashland, 41101
606-324-4481
PD 1901 47

Shah, Mrudula J.
Ofc. 423-22nd St.
Ashland, 41101
606-325-8556
OBG 7004 67

Sparks, Clyde Cecil
Ofc. 3614 Old Orchard Dr.
Ashland, 41101
Res. 3614 Old Orchard Dr.
Ashland, 41101
SU 1602 32

Stapleton, Bruce M.
Barby
Ofc. 3142 Winchester Ave.,
Box 150
Ashland, 41105
606-325-9769
Res. #10 The Oaks
Ashland, 41101
IM 1612 70

Stemkowski, Paul E.
Karen Sue
Ofc. 1200 Bath Ave.
Ashland, 41101
606-329-9715
Res. 126 Mockingbird Road
Russell, 41169
606-836-8836
R 7903 77

Stephenson, Joseph E.
Polly
Ofc. 2726 Cumberland Ave.
Ashland, 41101
Res. 2726 Cumberland Ave.
Ashland, 41101
606-324-4732
SU 1602 42

Tackett, Robert N.
Mary
Ofc. 2211 Montgomery Ave.
Ashland, 41101
Res. 4850 Bambury Rd.
Ashland, 41101
OBG 1612 69

Touma, Ralph I.
Aida
Ofc. 330 21st St.
Ashland, 41101
606-325-4697
Res. 619 Amanda Furnace
Ashland, 41101
606-329-8761
ORS 9101 69

Uhron, William G.
Ofc. 2808 Cumberland Ave.
Ashland, 41101
Res. 2808 Cumberland Ave.
Ashland, 41101
IM 1612 71

Watson, Charles T.
Pamela S.
Ofc. 2301 Lexington Ave.
Ashland, 41101
606-324-1188
Res. 713 Bellefonte Princess Road
Ashland, 41101
606-324-3682
OTO 106 69

Wheeler, Max E.
Helen
Ofc. 2222 29th St.
Ashland, 41101
606-325-0333
Res. 2535 Lynnhaven Court
Ashland, 41101
606-325-3474
FP 1602 60

Williams, Walter F.
Inez
Ofc. 2217 Forest Ave.
Ashland, 41101
Res. 2217 Forest Ave.
Ashland, 41101
606-324-9591
OTO 1602 35

Williamson, James F.
Lavonne
Ofc. 2301 Lexington
Ashland, 41101
Res. 2725 Auburn Avenue
Ashland, 41101
606-325-7328
OBG 1602 57

Winn, Philip J.
Betty
Ofc. 841 29th St.
Ashland, 41101
Res. 3636 Old Orchard Dr.
Ashland, 41101
FP 4504 50

BELL

Alexander, Robert N.
Pamela S.
Ofc. P.O. Box 1466
Middlesboro, 40965
606-337-7017
Res. 3100 W. Cumberland Ave.
Middlesboro, 40965
606-248-4284
D 4106 54

Asher, David C.
Ofc. 850 Riverview Ave.
Pineville, 40977
GP 1602 54

Biggs, Jr., James R.
Ann
Ofc. Pineville Comm. Hosp.
Assoc.
Pineville, 40977
606-337-9738
Res. 127 Rebel Drive
Somerset, 42501
606-337-2578
R 1612 65

Cabuay, Bienvenido A.
Ofc. 139 Summit Dr.
Pineville, 40977
Res. Summit Drive
Pineville, 40977
EM 8506 63

Cawood, Charles David
Louisa H.
Ofc. P.O. Box 26
Middlesboro, 40965
Res. 1100 N. 25th Street
Middlesboro, 40965
606-248-2118
GP 1602 31

Corum, Joanne D.
James
Stoney, Fork, 40988
Res. Box 263A
Stoney Fork, 40988
606-337-2941
GP 1612 67

Cullum, Albert G.
Ofc. 920 Dorchester Ave.
Middlesboro, 40965
OTO 3109 42

Evans, Meredith J.
Helen M.
Ofc. P.O. Box 1238
Middlesboro, 40965
606-248-4825
Res. Cherokee Drive
Middlesboro, 40965
606-248-3296
SU 1602 49

Flowers, Samuel H.
Ofc. Box 824
Middlesboro, 40965
Res. 5 Edgewood Ct.
Middlesboro, 40965
606-248-4567
GP 1602 31

Forde, Francis A.
Ofc. Daniel Boone Clinic
Middlesboro, 40965
Res. Cherokee Drive
Middlesboro, 40965
OBG 3119 46

Golden, James S.
Betty
Ofc. 850 Riverview Ave.
Pineville, 40977
606-337-2200
Res. Tennessee Ave.
Pineville, 40977
607-337-2525
GP 4501 48

Hays, Talmadge V.
Deloris
Ofc. 850 Riverview Ave.
Pineville, 40977
606-337-7002
Res. Highlands
Pineville, 40977
606-337-6590
SU 1602 67

Khorram, Houshang
Ofc. Daniel Boone Clinic
Middlesboro, 40965
Res. Cirencester Avenue
Middlesboro, 40965
PD 7101 60

Kirkpatrick, Charles L.
Ofc. Daniel Boone Clinic
Middlesboro, 40965
Res. 1118 Gloucester Avenue
Middlesboro, 40965
IM 4105 30

LeSage, J. Bernard
Fleurette
Ofc. Daniel Boone Clinic
Middlesboro, 40965
606-248-9800
Res. 420 Englewood Road
Middlesboro, 40965
606-248-5911
SU 5905 45

Mappala, Francisco C.
Eunice Bencito
Ofc. Middlesboro A. R. Hosp.
Middlesboro, 40965
606-248-3300
Res. 714 Cirencester Avenue
Middlesboro, 40965
606-298-8792
EM 5088 70

Matheny, Robert B.
Ann Dudley
Ofc. Box 187
Middlesboro, 40965
606-248-6995
Res. 412 Englewood, Box 187
Middlesboro, 40965
606-248-5622
GP 1701 62

Mills, Buell B.
Ina E.
Ofc. P.O. Box 890
Pineville, 40977
606-337-2919
Res. 205 Summit Drive
Pineville, 40977
606-337-2455
FP 1602 51

Moore, Jr., Charles C.
Ofc. Daniel Boone Clinic
Middlesboro, 40965
Res. 808 N. 27th
Middlesboro, 40965
FP 1602 59

Mujumdar, Suhas P.
Sulabha S.
Ofc. P.O. Box 1208
Middlesboro, 40965
606-248-3100
Res. 114 George Ann Drive
Middlesboro, 40965
606-248-0473
U 7013 65

Mujumdar, Sulabha S.
Suhas P.
Ofc. P.O. Box 1208
Middlesboro, 40965
606-248-3100
Res. 114 George Ann Drive
Middlesboro, 40965
606-248-3100
OBG

Pongdee, Ouen
Ratana
Ofc. Middlesboro Comm. Hosp.
Middlesboro, 40965
606-248-3300
Res. West Winchester Avenue
Middlesboro, 40965
606-248-4155
R 9201 67

Rader, Emmanuel H.
Sherwin
Ofc. 850 Riverview Ave.
Pineville, 40977
606-337-3559
Res. 414 Tennessee Ave.
Pineville, 40977
606-337-5505
GP 1612 68

Rader, W. Allen
Ofc. 123 Woodland Dr.
Pineville, 40977
GP 1612 81

Rasmussen, Kenneth
Ofc. Middlesboro Community
Hosp.
Middlesboro, 40965
EM 75

Robinson, Ralph R.
Ofc. 2024 Cumberland
Middlesboro, 40965
606-248-4862
Res. 322 Edgewood Road
Middlesboro, 40965
606-248-1108
OBG 4604 55

Smith, Kenneth W.
Isabelle F.
Ofc. Daniel Boone Clinic Box 699
Middlesboro, 40965
606-248-5800
Res. 4 Edgewood Court
Middlesboro, 40965
606-248-5800
IM 2007 58

Stacy, Charles B.
Hazel
Ofc. 850 Riverview
Pineville, 40977
Res. Highlands
Pineville, 40977
FP 1602 26

Walker, Jesse L.
Lucillee
Ofc. c/o Laurel Fork Clinic
Frakes, 40940
615-784-9083
FP 1005 41

Wilson, Edward S.
Dessie
Ofc. 111 Valley Rd.
Pineville, 40977
606-337-2350
Res. 111 Valley Rd.
Pineville, 40977
606-337-2350
FP 1602 35

Woolum, Jerry L.
Kay
Ofc. 850 Riverview
Pineville, 40977
606-337-2305
Res. Highlands
Pineville, 40977
606-337-6377
SU 1612 69

BOYLE

Ahnquist, Gary R.
Ofc. 333 So. 3rd St.
Danville, 40422
606-236-7712
Res. 1144 Stirling Drive
Danville, 40422
606-236-3611
OBG 1206 76

Bailey, Rogers Q.
Connie
Ofc. 214 So. Third St.
Danville, 40422
Res. 521 Cardinal Terrace
Danville, 40422
FP 1612 69

Baird, John M.
Ofc. 216 Maple Ave.
Danville, 40422
502-236-3556
Res. 216 Maple Ave.
Danville, 40422
EM 1602 53

Bateman, Robert C.
Charlotte W.
Ofc. 319 Maple Ave.
Danville, 40422
Res. 319 N. Maple Ave.
Danville, 40422
606-236-4548
GP 1701 39

Bux, Madar
Shakeela P.
Ofc. 459 W. Green
Danville, 40422
606-236-3726
Res. P.O. Box 785 Bluegrass Pike
Danville, 40422
606-236-4291
ANES 7015 62

Bux, Shakeela P.
Ofc. P.O. Box 879
Danville, 40422
Res. 215 S. Fourth
Danville, 40422
P 7015 65

Caldwell, Harry G.
Molly
Ofc. 200 So. Second St., Box 277
Danville, 40422
606-236-8313
Res. P.O. Box 277
Danville, 40422
606-236-7409
OPH 1602 58

Cecil, III, Bennet D.
Debra
Ofc. 307 W. Broadway
Danville, 40422
606-236-0000
Res. 300 Streamland Drive
Danville, 40422
606-236-0547
IM 1602 77

Cody, Jack E.
Nancy
Ofc. P.O. Box 129
Danville, 40422
606-236-2222
Res. 457 Boone Trail
Danville, 40422
606-236-1418
SU 1602 69

Daniel, Jr., Kearney B.
Kitty
Ofc. P.O. Box 129 By Pass
Danville, 40422
606-236-2222
Res. RT #5, Box 46, Hustonville Rd.
Danville, 40422
606-236-4223
SU 1602 56

Glover, Michael W.
Cathy
Ofc. 333 So. Third St.
Danville, 40422
Res. 181 Mason Ave.
Danville, 40422
606-238-7555
OBG 1612 72

Gulley, James G.
Ann
Ofc. U.S. 150 By-Pass
P.O. Box 52
Danville, 40422
606-236-0916
Res. 411 McDowell Dr.
Danville, 40422
606-236-0226
D 1602 64

Hamner, Donald L.
Janet
Ofc. 101 So. Second St.
Danville, 40422
606-236-9662
Res. 212 Maple Ave.
Danville, 40422
FP 1612 72

Harrison, Alvin R.
Valli S.
Ofc. 333 So. 3rd St.
Danville, 40422
606-236-7712
Res. 1102 Stirling Dr.
Danville, 40422
606-236-8252
OBG 1612 74

Hendrickson, Robert F.
Brenda W.
Ofc. 212 So. Second St.
Danville, 40422
606-236-3361
Res. 451-G Boone Trail
Danville, 40422
606-236-2932
FP 1612 72

Jackson, Richard G.
Katherine
Ofc. 432 W. Main St.
Danville, 40422
Res. 459 Fitzpatrick Ave.
Danville, 40422
SU 3120 39

Jackson, William M.
Gerry
Ofc. 412 So. Fourth St.
Danville, 40422
Res. Rt. #2, Chrisman Ln.
Danville, 40422
ORS 1602 63

Jackson, Elmer H.
Susie
Ofc. 218 So. Third St.
Danville, 40422
606-236-8833
Res. Rt. 2, Box 352,
Chrisman Lane
Danville, 40422
R 1602 68

Jackson, Jr., Richard G.
Carol
Ofc. 217 South Third St.
Danville, 40422
Res. P.O. Box 912
Danville, 40422
PATH 1602 74

Jackson, Jr., Chrisman
Sue
Ofc. By Pass So.
Danville, 40422
606-236-2222
Res. Rt. #2 Spears Lane
Danville, 40422
606-236-4300
SU 1602 59

Liebschutz, David C.
Patricia
Ofc. 333 So. Third St.
Danville, 40422
606-236-7371
Res. 2049 Cardinal Terrace
Danville, 40422
606-236-7000
SU 1602 68

Lukins, Joseph L.
Joan C.
Ofc. 333 So. 3rd St.
Danville, 40422
606-236-8730
Res. Rt. 2, Lancaster Road
Danville, 40422
606-236-1204
ORS 1612 69

Mahaffey, Charles K.
Ofc. P.O. Box 818
Danville, 40422
606-236-4121
Res. 518 Boone Trail
Danville, 40422
606-236-5177
R 4106 46

Martin, Florentino A.
Ofc. P.O. Box 291
Danville, 40422
606-236-7326
Res. 515 Graham Road
Danville, 40422
606-236-2650
U 5088 56

McClure, George M.
Helen McCormick
Ofc. 304 So. Fourth St.
Danville, 40422
Res. 304 South Fourth St.
Danville, 40422
606-236-2034
OBG 1201 32

Montgomery, Jr., Eldridge
Sara
Ofc. 315 A W. Green St.
Danville, 40422
606-236-9670
Res. 409 Maple Avenue
Danville, 40422
606-236-5399
U 1612 72

Pesci, William L.
Delores
Ofc. 217 S. 3rd St.
Danville, 40422
606-236-4121
Res. 517 Barbee Way
Danville, 40422
606-236-7760
PATH 1602 61

Ramey, James W.
Betty D.
Ofc. 212 So. Second St.
Danville, 40422
606-236-3361
Res. 443 Boone Trail
Danville, 40422
606-236-4023
FP 3207 54

Reid, Samuel H.
Zelda
Ofc. 214 So. 3rd Street
Danville, 40422
606-236-6575
Res. 353 East Lexington Avenue
Danville, 40422
606-236-8836
FP 1602 61

Scutchfield, Scott B.
Bunny
Ofc. 333 South 3rd St.
Danville, 40422
606-236-8730
Res. 1076 Argyl Drive
Danville, 40422
606-236-0641
ORS 1612 75

Shearer, Glenn R.
Linda M.
Ofc. 333 So. Third
Danville, 40422
606-236-7371
Res. Danville, 40422
606-236-0381
SU 1612 73

Sisk, Charles W.
Ofc. 214 So. Third St.
Donville, 40422
Res. 514 Grohom Rd.
Donville, 40422
FP 1602 53
Stigall, Robert W.
Atha B.
Ofc. 333 Brookside Dr.
Donville, 40422
606-236-4121
Res. 333 Brookside Dr.
Donville, 40422
606-236-0342
R 1602 74

BOONE

Ammon, John D.
Ofc. 8047 Burlington
Florence, 41042
606-371-5968
Res. 1525 Petersburg Rd.
Burlington, 41005
FP 1602 64
Baird, Glenn F.
Honnoh
Ofc. 7621 Dixie Hwy.
Florence, 41042
606-371-2100
Res. 7623 Dixie Highway
Florence, 41042
606-384-3737
FP 1602 62
Booth, Herbert R.
Edno K.
Ofc. 7621 Dixie Hwy.
Florence, 41042
606-371-2100
Res. Route 2, Box 213
Union, 41091
606-384-3468
FP 1602 62
Caldwell, Jr., Charles E.
Eloine A.
Ofc. 7211 U.S. 42
Florence, 41042
606-371-1153
Res. 111 Soddle Ridge
Burlington, 41005
606-586-6794
FP 1602 74
Daugherty, Harry R.
Ofc. 1 Shelby St.
Florence, 41042
Res. Highwoy 42
Florence, 41042
GP 1602 34
Daugherty, Joseph F.
Borboro
Ofc. 256 Moin St.
Florence, 41042
Res. 122 W. Lokeside Ave.
Ft. Mitchell, 41017
OBG 1602 52

Francis, Herbert B.
Sylvio
Ofc. Booth Memorial Hosp.
Florence, 41042
606-525-5435
Res. 1833 Keys Crescent
Cincinnoti, OH, 45206
513-961-6353
R 3441 54
Golder, Philip
Janet
Ofc. Wm. Booth Mem. Hosp.
Florence, 41042
606-525-5460
Res. 3818 Millsbroe Ave.
Cincinnoti, 45209
513-631-6061
PATH 3441 77
Grogan, Michael J.
Dion
Ofc. 292 Beemon Ln.
Florence, 41042
606-371-4983
FP 1612 79
Hess, Lee C.
Wollie
Ofc. 7211 U.S. 42
Florence, 41042
606-371-1153
Res. 7555 Dogwood Ln.
Florence, 41042
606-371-4828
FP 1602 56
Houston, Wilbur R.
Lucille
Ofc. 12 Bortlett Ave.
Erlonger, 41018
Res. 12 Bortlett
Erlonger, 41018
FP 3402 29
Huey, James M.
Cordello
Ofc. 24 No. Moin St.
Wolton, 41094
606-485-4982
Res. RR L, Box 142
Wolton, 41094
606-356-9008
GP 1602 40
Kuzman, John H.
Koren
Ofc. 8172 Moll Rd. #203
Florence, 41042
Res. 1913 Mt. Vernon Dr.
Ft. Wright, 41011
SU 3441 71
Levin, Richard D.
Sherry
Ofc. 7510 US Hwy 42
Florence, 41042
Res. 4795 Droke Rood
Cincinnoti, Ohio, 45243
513-271-4212
OPH 3441 71

Markesbery, Harold V.
Ofc. 8047 Burlington Pike
Florence, 41042
606-371-5968
Res. 204 Gorrord St.
Covington, 41011
FP 1612 65
McElheney, Diane M.
William
Ofc. 246 Moin St.
Florence, 41042
525-7788
Res. 3042 Brookwood Circle
Edgewood, 41017
331-6168
P 1612 68
Poore, Floyd G.
Ofc. 7621 Dixie Hwy.
Florence, 41042
Res. 110 Musket Rood
Florence, 41042
FP 1602 62
Ravenscraft, Howard L.
Joyce Ann
Ofc. 215 Constonce Rd.
Hebron, 41048
606-689-4311
Res. 215 Constonce Rood
Hebron, 41048
606-689-7784
FP 1602 55
Reutman, William E.
Noncy R.
Ofc. 7623 Dixie Hwy.
Florence, 41042
606-371-2100
Res. 7623 Dixie Highwoy
Florence, 41042
FP 1602 74
Schmitz, John P.
Potti
Ofc. 7536 US 42
Florence, 41042
Res. 285 Beechwood Rd.
Ft. Mitchell, 41017
ORS 1612 72
Schrand, James R.
Marilyn
Ofc. 7211 U.S. 42
Florence, 41042
606-371-1153
Res. 32 Loke
Florence, 41042
FP 1602 60
Schuler, John K.
Debbie
Ofc. 2600 Alexondrio Pike
Highland Heights, 41076
606-781-6262
Res. 27 Poul Hesser Drive
Lokeside Pork, 41017
ORS 3441 75
Scudder, Jr., Frank E.
Ofc. 7711 Tanners Lone
Suite 106
Florence, 41042
606-525-6467
Res. 126 Elmsmeod Court
Crestview Hills, 41017
606-331-7133
OBG 1602 72

Shearer, David
Pam
Ofc. 7623 Dixie Hwy.
Florence, 41042
606-525-6770
Res. 9 Kimberly Dr., RR 2
Union, 41091
606-384-3721
D 71
Shearer, Gary A.
Ofc. 7621 Dixie Hwy.
Florence, 41042
606-371-2100
Res. 751 Boone Aire Rd.
Florence, 41042
606-525-2153
FP 1602 72
Sheridan, Richard T.
Rhonda
Ofc. 7536 US 42
Florence, 41042
Res. 213 Summit Ln.
Ft. Mitchell, 41017
ORS 2107 70
Stephens, Charles O.
Judie
Ofc. 7711 Tonners Ln. Suite 106
Florence, 41042
606-525-6467
Res. 3106 Hudnoll Ln.
Ft. Mitchell, 41017
606-341-7611
OBG 2434 63
Tagher, Paul L.
Ofc. 256 Moin St.
Florence, 41042
606-525-8181
Res. Box 142 Hgwy 25
Wolton, 41094
606-485-4000
PD 5088 59
Waller, William M.
Leolo C.
Ofc. 1 Beotrice Ave.
Walton, 41094
606-485-4116
Res. Rt. 1 Box 28-A
Verono, 41092
606-485-4575
FP 1602 60
Westerman, James K.
Potricia
Ofc. 7100 Dixie Hwy.
Florence, 41042
606-371-6996
Res. 230 Merrowoy
Florence, 41042
606-525-2640
FP 1602 71
Zalla, James A.
Morno
Ofc. 256 Moin St.
Florence, 41042
606-283-1033
Res. 1200 Comp Ernst Rood
Burlington, 41005
606-586-5955
D 1602 64

BOURBON—BRACKEN—BRECKINRIDGE—BREATHITT—BULLITT—BUTLER—CAMPBELL

BOURBON

Asriel, Erwin
Peggy
Ofc. 17 W. Fifth St.
Paris, 40361
606-987-1710
Res. 250 Houstan Ave.
Paris, 40361
606-987-2300
FP 5088 38

Berman, Robert S.
Barbara J.
Ofc. 525 High St.
Paris, 40361
606-987-4693
Res. RR 3 Bax 431
Ruddles Mill Rd.
Paris, 40361
606-987-1377
SU 1502 59

Cox, William H.
Margaret
Ofc. 3055 Lynwaad Dr.
Paris, 40361
Res. Lynnwaad Dr.
Paris, 40361
987-4100
FP 1602 51

Ferrell, James L.
Judith
Ofc. Rt. 5
Paris, 40361
606-987-2200
Res. Raute 5, Bax 345
Paris, 40361
606-987-4781
FP 4501 58

Linville, Aaron W.
Linda
Ofc. 274 East Main St.
Paris, 40361
Res. Rt. #6
Paris, 40361
606-987-5559
FP 1612 72

Morgan, William S.
Ofc. 4 East Main St.
Paris, 40361
GP 4504 37

West, Murray D.
Raberta
Ofc. 2017 Sa. Main St.
Paris, 40361
606-987-3710
Res. Raute 6 Bax 24
Paris, 40361
606-987-0671
GP 5902 72

Wever, Richard J.
Ofc. 509 High St.
Paris, 40361
606-987-3220
Res. 509 High Street
Paris, 40361
606-987-3300
FP 3441 45

Davis, William E.
Ofc. 341 E. Main St.
Paris, 40361
606-987-1915
Res. Bax 6
Narth Middletawn, 40357
606-362-4498
PH 1206 27

BRACKEN

Brindley, Milton L.
Maryalis H.
Ofc. 222 Main St.
Augusta, 41002
606-756-2137
Res. 222 Main St.
Augusta, 41002
GP 1602 71

Cummins, Dewey E.
Ann
Ofc. Lacust St.
Braaksville, 41004
606-735-2118
Res. R. R. 2
Braaksville, 41004
606-735-2171
GP 1602 53

BRECKINRIDGE

Brown, William H.
Kathryn S.
Ofc. Box 145
Irvingtan, 40146
502-547-3005
GP 1602 37

Buchele, Earl S.
Clara
Ofc. Rt. 1, Bax 134-A
Hardinsburg, 40143
502-756-2117
Res. Hardinsburg, 40143
502-788-6405
SU 1211 63

Chambliss, Robert B.
Janet
Ofc. Rt. 1, Bax 134-B
Hardinsburg, 40143
502-756-2258
Res. R. R. #1
Hardinsburg, 40143
502-756-2811
FP 4106 63

Hatfield, William D.
Helen Frances
Ofc. Medical Ctr.
Irvingtan, 40146
Res. Bax 79, Raute 1
Irvingtan, 40446
502-547-2000
GP 1602 58

Owens, Harold W.
Mary Ann
Ofc. Medical Ctr.
Irvingtan, 40146
502-547-2100
Res. Irvingtan, 40146
502-547-4455
GP 1602 61

Sills, James G.
Sheila Ann
Ofc. Medical Arts Bldg.
Hardinsburg, 40143
Res. Bax 3B
Harned, 40144
502-756-5966
FP 1602 59

BREATHITT

Cornett, Robert E.
Ofc. 1106 Main St.
Jacksan, 41339
Res. 1106 Main
Jacksan, 41339
GP 1602 55

Lewis, F. Cohen
Margaret H.
Ofc. 1117 Main St.
Jacksan, 41339
606-666-2383
Res. 1119 Main Street
Jacksan, 41339
606-666-2831
GP 1602 43

Sewell, III, H. Price
Ofc. 1128 Main St.
Jackson, 41339
Res. 380 Braadway
Jacksan, 41339
FP 1612 70

Turner, Emanuel C.
Brenda F.
Ofc. 1029 College Ave.
Jackson, 41339
606-666-5142
Res. c/a General Delivery
Talbert, 41377
606-295-3231
GP 1602 73

BULLITT

Arla, Mohana R.
Rama Devi
Ofc. P.O. Box 398
Lebanon Junctian, 40150
502-833-4631
Res. Lebanan Junction, 40150
502-833-4986
IM 5088 75

Bowen, R. Stephen
Wanda
Ofc. Bax 67
Mt. Washingtan, 40047
502-538-4213
Res. Evans Lane
Mt. Washingtan, 40047
502-538-4294
FP 1602 52

Brewer, James H.
Ofc. 2214 E. 4th St.
Shepherdsville, 40165
502-955-7311
Res. 10707 Calanial Waads
Caurt
Lauisville, 40223
502-244-0830
FP 1602 73

Cundiff, Jr., James R.
Martha
Ofc. 2214 E. 4th St.
Shepherdsville, 40165
502-543-6362
Res. Star Route, Box 223
Shepherdsville, 40165
502-543-4979
FP 1602 74

Hamilton, William B.
Helen
Ofc. 2214 E. 4th St.
Shepherdsville, 40165
502-543-3091
Res. 3228 Beals Branch Rd.
Lauisville, 40206
502-895-4680
FP 1602 53

Hines, John H.
Ofc. 2214 E. 4th St.
Shepherdsville, 40165
502-543-3091
FP 1602 72

Murphy, Jr., Patrick
Sybil
Ofc. 2214 E. 4th St.
Shepherdsville, 40165
502-955-8032
FP 1602 78

BUTLER

Wan, Richard T.
Kathleen P.
Ofc. Wans Clinic
Morgantawn, 42261
FP 6103 61

CAMPBELL

Anderson, Carl A.
Ofc. 122 N. Ft. Thomas Ave.
Ft. Thomas, 41075
606-441-0014
Res. 122 N. Ft. Thomas Ave.
Ft. Thamas, 41075
GP 1206 44

Anderson, Werner W.
Linda D. McDyer
Ofc. 718 Columbia Ave.
Newpart, 41071
606-491-6510
Res. 718 Columbia Ave.
Newport, 41071
606-341-0629
P 2204 45

Bae, Jae-Keun
Seh J.
Ofc. 39 Pentland Place
Ft. Thamas, 41075
606-525-6091
Res. 39 Pentland Place
Ft. Thamas, 41075
606-781-2002
ANES 5088 69

CAMPBELL

Beckmeyer, Jr., Wm. J.
Elizabeth A.
Ofc. 600 S. Ft. Thamas Ave.
Ft. Thomas, 41075
606-781-1310
Res. 600 Alexandria Pike
Ft. Thomas, 41075
606-781-1609
PD 802 55

Boeh, Daniel H.
Ophelia G.
Ofc. 645 So. Ft. Thamas Ave.
Ft. Thamas, 41075
Res. 645 S. Ft. Thomas Ave.
Fort Thamas, 41075
GP 3441 36

Braun, Joseph G.
Madanna
Ofc. 3609 Alexandria Pike
Cold Spring, 41076
Res. 3609 Alexandria Pike
Cold Spring, 41076
FP 3441 57

Buten, Robert E.
Mary
Ofc. 1001 Yark St.
Newpart, 41071
606-261-3439
Res. 49 Donnelly Drive
Ft. Thomas, 41075
606-441-3681
OPH 3441 51

Cholera, Vinoobhai M.
Helma
Ofc. 237 East Tenth St.
Newpart, 41071
606-431-2212
Res. 905 Squire Hill
Crescent Springs, 41017
606-341-0828
FP 5088 46

Clear, Robert C.
Jean
Ofc. 300 Fairfield
Bellevue, 41073
606-261-4661
Res. 3073 Arbor Drive
Edgewoad, 41017
606-341-4185
FP 3441 55

Conners, Jerry W.
Pat
Ofc. 20 N. Grand Ave.
Ft. Thamas, 41075
606-781-2700
Res. 93 Winstan Hill
Ft. Thamas, 41075
606-781-0393
OPH 1602 69

Cook, Todd M.
Melissa
Ofc. 3700 Alexandria Pike
Cald Spring, 41076
606-781-4111
Res. 2 Michael Ct.
Edgewaad, 41017
606-341-4871
FP 1612 74

Crary, Paul D.
Ja
Ofc. Box 862
Covingtan, 41012
606-581-8855
Res. 54 Covers Pl.
Ft. Thamas, 41075
606-441-0099
R 2434 63

Davila, Luis E.
Lala
Ofc. 800 Alexandria Pike
Ft. Thamas, 41075
Res. 81 Mel Lawn
Ft. Thomas, 41075
SU 5088 52

Dawson, John E.
Ofc. 2 Arrowhead Dr.
Alexandria, 41001
606-635-2490
Res. 2 Arrawhead Drive
Alexandria, 41001
606-635-2490
GP 3441 28

Dempsey, Jerry E.
Debby
Ofc. 3700 Alexandria Pike
Cold Spring, 41076
606-781-4111
Res. 27 Linden Ave.
Ft. Thamas, 41075
FP 1612 74

Draime, Robert G.
Eileen
Ofc. 654 Highland Ave.
Ft. Thamas, 41075
606-441-2715
Res. 19 Gaddis Drive
Ft. Thamas, 41075
606-441-0365
FP 3441 59

Farrell, Earl J.
Rose L.
Ofc. 71 Sa. Crescent Ave.
Ft. Thamas, 41071
Res. 71 Sa. Crescent Ave.
Ft. Thamas, 41071
606-781-0337
PD 1602 47

Faulkner, Joseph S.
Madrew
Ofc. 618 Fairfield Ave.
Bellevue, 41073
606-261-4014
Res. 135 Riverside Parkway
Ft. Thamas, 41075
606-441-4040
FP 1602 32

Frickman, Don H.
Ofc. 2021 Alexandria Pike
Highland Hts., 41076
606-441-4000
Res. 2021 Alexandria Pike
Highland Hts., 41076
IM 3441 49

Friedeman, Elliott M.
Jayce S.
Ofc. 106 Wellingtan Pl.
Cincinnati, OH, 45219
513-721-1500
Res. 850 Lincaln Raad
Bellevue, 41073
606-261-4058
P 903 72

Ghali, Nabil N.
Ofc. 124 Hollywaads Dr.
Ft. Thamas, 41075
606-441-4623
Res. 128 Hollywaads Dr.
Ft. Thomas, 41075
606-441-4623
OBG 5088 58

Giese, Frank W.
Donna Marie
Ofc. 2372 Crisler Ave.
Ft. Mitchell, 41017
606-341-6281
Res. 2503 Kingstan Caurt
Villa Hills, 41016
606-341-0608
NEP 3440 76

Gochoel, Jeffrey D.
Lais R.
Ofc. 661 Buttermilk Pike
Crescent Springs, 41017
606-331-4665
Res. 1745 Stanehouse
Cincinnati, Ohia, 45230
513-232-5651
OBG 3443 78

Grefer, Michael A.
Maggie
Ofc. 1201 Sa. Fart Thomas Ave.
Ft. Thamas, 41075
Res. 54 Ria Vista
Ft. Thamas, 41075
ORS 3141 73

Grover, John W.
Ofc. 122 N. Ft. Thamas Ave.
Ft. Thamas, 41075
606-441-0014
Res. 122 N. Ft. Thamas Ave.
Ft. Thamas, 41075
FP 3406 47

Gunn, John Curtis
Ofc. 122 E. 8th St.
Newpart, 41071
Res. 122 E. 8th St.
Newpart, 41071
OBG 301 54

Haas, Roger A.
Jaan W.
Ofc. 339 Skyline Drive
Cald Spring, 41076
606-572-3151
Res. 339 Skyline Dr.
Cald Spring, 41076
606-441-2704
EM 3441 59

Haas, Joseph F.
Barbara
Ofc. 18 Na. Ft. Thamas Ave.
Ft. Thamas, 41075
606-781-4900
Res. 36 Ria Vista Drive
Ft. Thamas, 41075
ENT 3408 72

Heavern, Thomas L.
Pat
Ofc. 2019 Alexandria Pike
Highland Heights, 41076
Res. 136 Winters Lane
Cold Spring, 41076
PD 1602 57

Holmes, John C.
Ofc. 747 Buttermilk Pike
Crescent Springs, 41017
606-331-0774
Res. 1012 Cliftan Hills Ave.
Cincinnati, OH, 41017
606-861-0879
C

Honey, Edward G.
Nancy
Ofc. 30 Hallywaads Dr.
Ft. Thamas, 41075
606-781-4441
Res. 95 Orchard Hill Rd.
Ft. Thomas, 41075
606-441-1321
OBG 1602 50

Howe, Allie E.
Ofc. 3 E. Main St.
Alexandria, 41001
606-635-9440
Res. 3 E. Main St.
Alexandria, 41001
606-635-9440
GP 3402 20

Jacobs, John A.
Maya
Ofc. 18 N. Ft. Thamas Ave. 3B
Fart Thamas, 41075
606-781-6200
Res. 333 Lafette Ave.
Cincinnati, OH, 45220
513-281-0510
ANES 1612 57

Kappes, Paul J.
Daris Lee
Ofc. 405 Fairfield Ave.
Bellevue, 41073
606-581-5940
Res. 67 Donnelly Dr.
Bellevue, 41073
606-781-0435
FP 1602 54

Kawerk, Jean
Souad
Ofc. St. Lukes Hosp.
Fart Thamas, 41075
606-572-3151
Res. 196 Penfield Lane
Cincinnati, OH, 45238
513-244-5728
EM 5088 58

Koehler, Frederick
Ofc. 327 Walnut St.
Bellevue, 41073
Res. 327 Walnut St.
Bellevue, 41073
FP 3402 24

CAMPBELL

Kramer, Michael J.
Jaan C.
Ofc. 747 Buttermilk Pike
Crescent Springs, 41017
606-341-9135
Res. 6401 Edgewaad
Cincinnati, OH, 45224
503-541-5950
N

Kratz, Robert C.
Ofc. 301 Washingtan Ave.
Newpart, 41071
606-261-3605
Res. 301 Washington
Newpart, 41071
606-261-3605
OTO 3441 47

Kruer, Richard D.
Shirley
Ofc. 221 Electric Ave.
Southgate, 41071
606-441-0011
Res. 221 Electric Ave.
Sauthgate, 41071
606-441-6738
FP 3441 52

Lichtenstein, Philip K.
Ofc. 2019 Alexandria Pike
Highland Heights, 41076
PD 4105 76

Martinez, Aureliano
Margarita Garza
Ofc. 810 Fifth Ave.
Daytan, 41074
606-291-5232
Res. 71 Carrington Paint
Ft. Thamas, 41075
606-781-3455
GP 7901 55

Mayer, Thomas M.
Sue
Ofc. 18 Na. Ft. Thamas Ave.
Ft. Thamas, 41075
606-781-4900
Res. 25 W. Lakeside Ave.
Cavingtan, 41017
OTO 3441 71

McCabe, Robert J.
Elizabeth A.
Ofc. Third & Washingtan Ave.
Newport, 41071
606-291-2999
Res. 40 Linden Hill Dr.
Newpart, 41071
606-331-1819
D 3441 44

Meyers, Stephen F.
Candy
Ofc. 1501 Alexandria Pike
Ft. Thamas, 41075
606-781-3110
Res. 1501 Alexandria Pike
Ft. Thamas, 41075
606-781-4585
OPH 3441 68

Milburn, Carol S.
Ofc. Cancer Trtment. Ctr.
St. Lukes
Ft. Thamas, 41075
606-572-3298
Res. Bax 356
Burlington, 41005
IM 2405 59

Mills, Jr., Harry F.
Susan
Ofc. 3781 Narraws Rd.
Erlanger, 41018
606-292-4353
Res. 606-727-0909
EM 1320 70

Molony, Dennis R.
Dian
Ofc. 18 Na. Ft. Thamas Ave.
Ft. Thamas, 41075
606-781-5020
Res. 55 Elsmar Place
Ft. Thamas, 41075
606-781-5020
D 1602 70

Murdock, Kenneth
Jaan
Ofc. 3120 Burnet #103
Cincinnati, OH, 45229
513-281-6200
Res. 6628 Paxtan-Guinea Raad
Loveland, OH, 45140
513-677-0828
R 3109 68

Naber, John A.
Ofc. 3800 Alexandria Pike
Cald Spring, 41076
606-441-9481
Res. 3800 Alexandria Pike
Cold Spring, 41076
GP 3441 47

O'Connor, Robert W.
Marge
Ofc. 122 E. 8th St.
Newpart, 41071
Res. 122 Tower Place
Ft. Thomas, 41075
OBG 3441 53

Pagani, Luis F.
Ofc. 629 Oak St., Suite 601
Cincinnati, OH, 45206
513-221-1100
Res. 629 Oak St., Suite 601
Cincinnati, OH, 45206
N

Pancoast, John R.
Priscilla
Ofc. St. Lukes Na. KY
Cancer Ctr.
Ft. Thamas, 41075
606-572-3298
Res. St. Luke Haspital
Ft. Thamas, 41075
513-451-6277
IM 3441 73

Park, Soon IE
Hyun
Ofc. 1833 Mt. Vernan Dr.
Fort Wright, 41011
606-525-6091
Res. 1833 Mt. Vernan Dr.
Ft. Wright, 41011
606-341-1219
ANES 5088 68

Pfister, Glenn L.
Margaret
Ofc. 627 Highland Ave.
Fort Thomas, 41075
606-441-8450
Res. 80 S. Shaw Lane
Fort Thomas, 41075
606-441-3042
SU 3401 45

Pierce, W. Vinson
Nell G.
Ofc. 822 N. Ft. Thamas Ave.
1-N
Fart Thomas, 41075
Res. 75 Henry Avenue
Fort Thomas, 41075
606-441-8433
U 1602 34

Reitz, John F.
Ida Lee
Ofc. 117 East 9th St.
Newpart, 41071
606-291-7957
Res. 13 Greenwaad
Ft. Thamas, 41075
606-441-2128
GP 3402 38

Rust, Richard J.
Larraine H.
Ofc. 307 E. Third St.
Newpart, 41071
606-581-8033
Res. 2171 N. Ft. Thomas Ave.
Newpart, 41071
606-441-0846
SU 3441 37

Saelinger, Donald A.
Sunny
Ofc. 800 Alexandria Pike
Ft. Thamas, 41075
Res. 6370 Grand Vista
Cincinnati, OH, 45213
IM 1602 73

Sandlin, Everett W.
Ofc. 939 Isabella St.
Newpart, 41071
Res. 939 Isabella St.
Newpart, 41071
606-635-5025
FP 1602 54

Schroer, James A.
Eleanar
Ofc. 17 E. 6th St.
Newport, 41071
606-431-8285
Res. 33 Manar Lane
Ft. Thamas, 41075
606-441-3456
IM 802 47

Schultz, Arthur F.
Ofc. 18 N. Ft. Thamas Ave., 2A
Ft. Thomas, 41075
606-441-1163
Res. 3509 Lakeside Ct.
Ft. Thamas, 41075
606-441-5630
IM 3441 32

Shapiro, Arnold G.
Lisa R.
Ofc. 747 Buttermilk Pk.
Crescent Springs, 41017
606-341-5740
Res. 513-522-8708
P 3145 77

Shirkey, Harry C.
Ofc. 2019 Alexandria Pike
Highland Heights, 41076
Res. 2019 Alexandria Pike
Highland Heights, 41076
PD 3441 45

Silanne, Hooshang
Mary
Ofc. 2021 Alexandria
Highland Heights, 41076
606-441-6300
Res. 15 Memory Lane
Ft. Thamas, 41075
606-441-4156
OBG 5088 68

Smith, Robert C.
Dorathy
Ofc. 20 Narth Grand Ave.
Ft. Thomas, 41075
606-441-6100
Res. 5004 Nob Hill Drive
Ft. Thomas, 41075
606-441-8303
N 3441 45

Sopko, Robert G.
Ofc. 122 N. Ft. Thamas Ave.
Ft. Thamas, 41075
606-441-0014
Res. 122 N. Ft. Thomas Ave.
Ft. Thamas, 41075
GP 1243 74

Stephens, Charles L.
Ofc. 85 Narth Grand
Ft. Thamas, 41075
Res. 31 Winston Hill
Ft. Thomas, 41075
PATH 1602 61

Stevens, Donald M.
Janie
Ofc. 2726 Alexandria Pike
Highland Heights, 41076
606-441-6160
Res. 2726 Alexandria Pike
Highland Heights, 41076
GP 3441 52

Stine, Frederick A.
Marjarie L.
Ofc. 2019 Alexandria Pkwy.
Highland Heights, 41076
606-441-7600
Res. 147 Manar Lane
Ft. Thomas, 41075
606-441-0052
PD 3441 39

Stratman, Edward J.
Marge
Ofc. 122 No. Fort Thamas Ave.
Fort Thomas, 41075
606-441-0014
Res. 60 Barrett Dr.
Ft. Thomas, 41075
GP 3441 40

Sutkamp, Jerry C.
Diana
Ofc. 2000 Memorial Pkwy.
Fart Thomas, 41075
606-441-9611
Res. 833 Covert Run Pike
Bellevue, 41073
606-441-6603
FP 1602 63

Swartzel, Robert L.
Nancy E.
Ofc. 2825 Burnet Ave.
Cincinnati, OH, 45219
513-281-3396
Res. 30 Linden Drive
Wyaming, OH, 45215
513-821-2914
PMR

Tanner, George R.
Mary S.
Ofc. RR 6
Cynthiana, 41031
606-572-3192
Res. 1715 S. Third St.
Louisville, 40208
606-234-3502
PATH 1602 46

Timmerman, Raymond J.
Mary
Ofc. 800 Alexandria Pike
Fort Thomas, 41075
Res. 51 Barrett Drive
Ft. Thomas, 41075
IM 3441 51

Whalen, Daniel A.
June
Ofc. 3194 No. Farmcrest
Cincinnati, OH, 45213
616-572-3202
Res. 3194 Na. Farmcrest
Cincinnati, OH, 45213
513-351-3760
ANES 3441 45

Zaacks, Philip L.
Lucille
Ofc. P.O. Box 51
Ft. Thomas, 41075
606-781-6200
Res. 2871 Fair Acres Drive
Cincinnati, OH, 45213
513-351-8328
ANES 8801 62

Zargar, Mehdi
Parvaneh
Ofc. 2600 Alexandria Pike
Highland Heights, 41076
606-781-5500
Res. 80 Walker Rd.
Ft. Thamas, 41075
606-781-5792
OBG 5088 68

Zimmer, Lawrence J.
Ofc. 747 Buttermilk Pk.
Crescent Springs, 41017
606-331-6488
Res. 3548 Paxton Ave.
Cincinnati, OH, 41073
513-891-2537
C

CALLOWAY

Barrett, David L.
Caral A.
Ofc. 803 Poplar St.
Murray, 42071
502-753-5131
Res. Rt. 8, Box 11
Murray, 42071
502-753-4065
PATH 1602 57

Binford, R. Bailey
Pat
Ofc. 300 Sa. Eighth
Murray, 42071
502-753-7272
Res. Raute 5, Bax 2062
Murray, 42071
502-436-2484
P 4106 64

Blalock, Richard E.
Darlene
Ofc. 300 Sa. 8th St., #302
Murray, 42071
502-759-9922
Res. 502-759-9630
IM 1602 79

Charette, Raymond
Diane
Ofc. 300 So. 8th St., Ste. 204
Murray, 42071
502-753-8896
Res. 2207 Quail Creek Drive
Murray, 42071
502-753-9994
ORS

Clark, Charles D.
Mary Ann
Ofc. 307 So. 8th St.
Murray, 42071
502-753-0213
Res. 801 S. 16th Street
Murray, 42071
502-753-1748
FP 4106 50

Cook, Charles E.
Martha C.
Ofc. 305 Sa. Eighth
Murray, 42071
502-753-9300
Res. Raute 4, Bax 16
Murray, 42071
502-753-8760
OBG 1602 72

Crouch, Richard H.
Cheryl
Ofc. 300 Sa. 8 St., Suite 301
Murray, 42071
502-759-4099
Res. 715 Goadman St.
Murray, 42071
502-753-0252
FP 1612 75

Eberle, David A.
Jane C.
Ofc. 300 Sa. 8th 107
Murray, 42071
502-753-9240
Res. 1508 Tabard
Murray, 42071
502-753-9452
U 1320 74

Garrastazu, Jorge
Bienvenida
Ofc. Murray-Callaway
County Hasp.
Murray, 42071
502-753-5131
Res. 1520 Canterbury Drive
Murray, 42071
502-753-0421
EM 6301 62

Golberg, John W.
Ofc. Suite 308
300 Sa. 8th St.
Murray, 42071
502-753-8896
Res. 104 S. 9th Street
Murray, 42071
ORS 5901 74

Green, Thomas L.
Lais A.
Ofc. Murray Wamans Clinic
Murray, 42071
502-753-9300
Res. 1720 Haliday Drive
Murray, 42071
502-759-4635
OBG 1612 74

Hart, James C.
Elizabeth F.
Ofc. Medical Arts Bldg.
Murray, 42071
502-753-3131
Res. 101 N. 8th St.
Murray, 42701
OPH 1602 44

Hart, William G.
Susan W.
Ofc. 300 Sa. 8th St.
Suite 201
Murray, 42071
502-753-3131
Res. 1320 W. Main Street
Murray, 42071
OPH 1602 75

Hart, Jr., James C.
Kathryn K.
Ofc. 300 S. 8th St.
Suite 201
Murray, 42071
502-753-3131
Res. 717 Elm Street
Murray, 42071
502-753-2336
OPH 1602 78

Houston, Hugh L.
Haulad
Ofc. 300 So. 8th St.
Murray, 42071
502-759-4433
Res. 1203 Crestwaad Place
Murray, 42071
502-753-1274
IM 4105 33

Houston, Hal E.
Ofc. 300 Sa. 8th St.
Murray, 42071
Res. Riverwaad Estates
Murray, 42071
502-753-6732
SU 1602 62

Hughes, Donald G.
Janna
Ofc. 300 Sa. 8th St.
Murray, 42071
502-753-2622
Res. 1610 Sycamare Ext.
Murray, 42071
502-753-3865
FP 1602 59

Jones, Conrad H.
Evelyn
Ofc. 305 Sa. 8th St.
Murray, 42071
502-753-9300
Res. 1314 Wells Blvd.
Murray, 42011
502-753-2463
OBG 1602 46

Kelly, Prue W.
Linda S.
Ofc. P.O. Bax 145
Murray, 42071
502-753-5131
Res. Raute 6
Murray, 42071
502-436-2633
R 1602 61

Klapper, Phillip B.
Patricia
Ofc. 300 Sa. 8th St.
Murray, 42071
502-759-4811
Res. 1521 Landan Drive
Murray, 42071
502-753-3006
OTO 4604 73

Lorenz, Mark A.
Caral
Ofc. 300 So. 8th St., 204
Murray, 42071
502-753-8896
Res. Rt. 7, Box 109-A
Murray, 42071
502-759-9821
ORS 5088 76

Lowry, Conie C.
Ofc. 300 Sa. 8th St.
Murray, 42071
502-759-4433
Res. 1010 Westgate Dr.
Murray, 42071
SU 4105 43

Marquardt, Robert G.
Brenda
Ofc. 300 So. 8th St.
Murray, 42071
502-753-0704
Res. 2209 Gatesbaraugh Cr.
Murray, 42071
502-753-7878
FP 1612 68

Miller, Dan
Ofc. 300 So. 8th St.
Suite 207
Murroy, 42071
502-753-2395
Res. 118 N. 14th St.
Murroy, 42071
502-753-8345
IM 1602
P'Pool, Billy W.
Lourel
Ofc. 901 Coldwoter Rd.
Murroy, 42071
502-753-1352
Res. Route 7, Box 45
Murroy, 42071
502-759-1866
GP 1612 74
Quertermous, John C.
Ello Moe
Ofc. 205 So. 8th St.
Murroy, 42071
502-753-5161
Res. 1308 Wells Boulevord
Murroy, 42071
502-753-2560
IM 1602 42
Quertermous, John R.
Terry S.
Ofc. 205 South Eighth St.
Murroy, 42071
502-753-5161
Res. Rt. 2, Box 3538
Murroy, 42071
502-759-4006
IM 1602 76
Stout, Richard H.
Lynn H.
Ofc. Rt. 2, Box 39
Murroy, 42071
502-753-7460
Res. 805 Olive St.
Murroy, 42071
502-753-8640
PD 1602 64
Tandon, Shashi K.
Neelom
Ofc. Murroy-Callowoy Hosp.
Murroy, 42071
Res. 1542 Oxford Dr.
Murroy, 42071
ANES 5088 72
Whayne, Harry U.
Joon
Ofc. Wells Holl, Murroy Stote
Murroy, 42071
502-762-3809
Res. 1612 Lochlomond Dr.
Murray, 42071
502-753-2643
GP 1701 50

Williams, Rob T.
Jeannetto D.
Ofc. 300 So. 8th St.
Suite 108
Murroy, 42071
502-753-4614
Res. Oxford Drive
Murroy, 42071
502-753-1326
SU
Wilson, William R.
Janith
Ofc. Box 42, RR#7
Murroy, 42071
502-753-5131
Res. R.R. 7, Box 42
Murroy, 42071
502-753-0428
R 1602 72

CARROLL

Amorocho, Jose M.
Ofc. 354 Churchill Park Apts.
Louisville, 40220
Res. 354 Churchill Pork Apts.
Louisville, 40220
502-459-6432
R 6204 58
Kutnicki, Benjamin
Ofc. 6 Franklin St., Box 86
Worsow, 41095
606-567-2754
Res. 906 Meode Street
Corrollton, 41008
502-732-4226
FP 1612 74
Law, Frank D.
Morgoret
Ofc. P.O. Box 349
Corrollton, 41008
502-732-6345
Res. 111 Mojove Troil
Corrollton, 41008
502-732-4134
SU 601 49
Martin, Cecil D.
Sondro
Ofc. P.O. Box 309
Corrollton, 41008
502-732-6956
Res. Route 1, Box 252E
Corrollton, 41008
502-732-4036
FP 1602 69
McCrocklin, Kenneth H.
Colurrhoe N.
Ofc. P.O. Box 209
Corrollton, 41008
502-732-4476
Res. 2915 Highlond Ave.
Corrollton, 41008
502-732-4476
SU 1602 50
Miller, David S.
Lynn
Ofc. P.O. Box 309
Corrollton, 41008
502-732-6956
Res. 1 Marwill Drive
Corrollton, 41008
502-732-8217
GP 5903 73

Palmer, Francis F.
Sherry
Ofc. P.O. Box 309
Corrollton, 41008
502-732-6956
Res. RR 1, Box 87
Corrollton, 41008
502-732-8261
FP 1602 75
Weaver, Edgar S.
Verna
Ofc. 1824 Shore Dr. S.
Apt. 106
South Posodeno, FL, 33707
813-344-1214
Res. 1824 Shore Dr.
South Pasadeno, FL, 33707
813-344-1214

CHRISTIAN

Adan, Jose R.
Dinoro
Ofc. Western Stote Hosp.
Hopkinsville, 42240
502-886-4431
Res. Russellville Rd.
Hopkinsville, 42240
502-885-7915
P 6301 59
Barlow, Charles A.
Nelson
Ofc. 1610 So. Moin
Hopkinsville, 42240
Res. 125 Remington Rd.
Hopkinsville, 42240
ORS 4106 66
Battah, Emmanuel J.
Arsholous
Ofc. Jennie Stuort Hosp.
Hopkinsville, 42240
502-886-5221
Res. 1025 Greot Ooks Dr.
Hopkinsville, 42240
502-886-6133
SU 7201 55
Calhoun, Neal
Mory
Ofc. 1610 So. Main St.
Hopkinsville, 42240
502-886-9491
Res. 500 Deepwood Drive
Hopkinsville, 42240
502-886-9605
FP 1602 51
Caplinger, Carl B.
Phyllis
Ofc. P.O. Box 742
Hopkinsville, 42240
502-866-5266
Res. 216 Por Ploce
Hopkinsville, 42240
OTO 4501 58
Chavez, Estrella
Menandro
Ofc. Western Stote Hosp.
Hopkinsville, 42240
Res. Russellville Rd.
Hopkinsville, 42240
502-885-1687
PD 5088 65

Clardy, Delmas M.
Mory H.
Ofc. P.O. Box 244
Hopkinsville, 42240
502-885-3422
Res. 2541 Cox Mill Rood
Hopkinsville, 42240
502-885-9498
SU 1602 32
Conlan, James K.
Bonnie D.
Ofc. 1725 Kenton
Hopkinsville, 42240
502-886-1274
Res. Rt. 4, Canton Pike
Hopkinsville, 42240
SU 1602 45
Connerth, James E.
Ofc. 222 W. 18th
Hopkinsville, 42240
502-885-7106
Res. 222 W. 18th St.
Hopkinsville, 42240
OBG 902 72
Coppedge, Ruth M.
Ofc. 1600 So. Virginio St.
Hopkinsville, 42240
502-886-6391
Res. Princeton Rood
Hopkinsville, 42240
502-885-8835
FP 1602 63
Cost, Guinn S.
Ann
Ofc. 111 Derrick Woy
Hopkinsville, 42240
502-885-1154
Res. 31 Robin Rd.
Hopkinsville, 42240
502-886-9086
FP 1612 72
Cotthoff, John E.
Lillion
Ofc. 1610 So. Moin St.
Hopkinsville, 42240
502-886-6900
Res. 3249 Circle Drive
Hopkinsville, 42240
502-886-6900
IM 4106 48
Cox, James B.
Inez
Ofc. 408 W. 17th St.
Hopkinsville, 42240
Res. 211 Jomes Dr.
Hopkinsville, 42240
502-886-3524
OBG 4106 60
Croft, Rachel G.
Ofc. 1600 S. Virginio St.
Hopkinsville, 42240
502-886-6391
Res. 1600 S. Virginio St.
Hopkinsville, 42240
502-886-1987
FP 1602 45

Crowder, II, Bennett L.
Non
Ofc. 607 Hammond Plozo
Hopkinsville, 42240
502-886-0124
Res. Julion Rd.
Hopkinsville, 42240
502-886-7378
SU 4106 61

Dade, James R.
Mortha S.
Ofc. 212 W. 18th St.
Hopkinsville, 42240
502-885-3194
Res. 212 West 18th
Hopkinsville, 42240
IM 4105 43

Davis, Edwin R.
Mortho
Ofc. Hospitol Ln.
Hopkinsville, 42240
502-885-3414
Res. 2704 Cayce Meode Drive
Hopkinsville, 42240
502-886-3886
R 1602 56

Forbes, James S.
Ofc. P.O. Box 234
Hopkinsville, 42240
Res. Circle Drive
Hopkinsville, 42240
ANES 4105 42

Frazier, James W.
Edno T.
Ofc. 207 So. Clay
P.O. Box 1105
Hopkinsville, 42240
502-885-5394
Res. 1018 Hoyes
Hopkinsville, 42240
502-886-6707
GP 4107 53

Fuqua, Joseph T.
Nodo
Ofc. 1611 So. Moin St.
Hopkinsville, 42240
Res. 3310 Cox Mill Rd.
Hopkinsville, 42240
502-886-9890
IM 4105 64

Gajera, Ratilal G.
Rito
Ofc. 212 W. 18th St.
Hopkinsville, 42240
502-885-0570
Res. 2113-D Ook Tree Villo Drive
Hopkinsville, 42240
502-886-2059
IM 5088 74

Garner, John R.
Ofc. Rt. 2
Herndon, 42236
GP 1602 32

Giannini, Jack Thomas
Loura
Ofc. 1611 So. Moin St.
Hopkinsville, 42240
502-886-7512
Res. 120 LongBow Court
Hopkinsville, 42240
SU 1602 70

Goode, Lyndon S.
Sheilo
Ofc. Midtown Medical Ctr.
Hopkinsville, 42240
502-886-5141
Res. 613 Deepwood Drive
Hopkinsville, 42240
502-886-5066
U 1602 58

Green, Milton M.
Velmo L.
Ofc. 111 N. Sunset Cir.
Hopkinsville, 42240
Res. 111 N. Sunset Circle
Hopkinsville, 42240
606-886-3232
FP 2006 42

Harned, John W.
Helen R.
Ofc. 3555 So. Atlontic Ave.
Doytono Beoch, FL, 32019
Res. 245 Tollwood Terroce
Roswell GA, 30075
404-993-6844
ENT 1005 24

Hart, Jerry T.
Ofc. 222 W. 18th
Hopkinsville, 42240
502-885-7106
Res. 1113 Bethel
Hopkinsville, 42240
OBG 4106 67

Howard, Ronald F.
Ofc. 1610 So. Moin St.
Hopkinsville, 42240
502-885-8445
Res. MidTown Medicol Center
Hopkinsville, 42240
PD 1602 64

Hurtiz, Hildebrando R.
Sorah
Ofc. Western Stote Hosp.
Hopkinsville, 42240
Res. Russellville Rood
Hopkinsville, 42240
502-885-5920
P 5088 47

Long, William L.
Cloire
Ofc. Hospitol Ln.
Hopkinsville, 42240
502-885-3414
Res. 200 Foston Chopel Rood
Hopkinsville, 42240
502-885-1244
R 4106 65

Maliyekkel, Ittoop T.
Lizy
Ofc. Western State Hosp.
Hopkinsville, 42240
502-886-4431
Res. P.O. Box 2200
Hopkinsville, 42240
502-885-0938
P 7033 71

Manlavi, Thelma S.
Robert
Ofc. Western Stote Hosp.
Hopkinsville, 42240
502-886-4431
Res. 129 Country Club Lone
Hopkinsville, 42240
502-886-0545
P 8507 55

May, Sean S.
Kothorine
Ofc. 110 So. Moin St., Suite 3
Hopkinsville, 42240
502-886-0263
Res. 1610 S. Moin
Hopkinsville, 42240
502-885-7138
IM 5088 68

McCord, Gerald H.
Wilmo
Ofc. 205 W. 15 St.
Hopkinsville, 42240
502-885-8436
Res. 2526 Country Club Lone
Hopkinsville, 42240
502-886-7569
FP 1602 59

McNerney, Jules J.
Ofc. 306 Deepwood Dr.
Hopkinsville, 42240
Res. 306 Deepwood Dr.
Hopkinsville, 42240
IM 1705 42

Mitenieks, Alfreds
Veroniko
Ofc. 316 Donno Dr.
Hopkinsville, 42240
Res. 316 Donna Dr.
Hopkinsville, 42240
502-886-5650
N

Myers, James P.
Ofc. 1704 S. Moin St.
Hopkinsville, 42240
Res. 1704 S. Moin St.
Hopkinsville, 42240
P 1602 54

Parrott, James A.
Phyllis
Ofc. Jennie Stuort Hosp.
Hopkinsville, 42240
502-885-3414
Res. 2607 Cox Mill Rood
Hopkinsville, 42240
502-886-1606
R 1612 65

Patel, Kusum
Nil
Ofc. 412 W. Riverwood Dr.
Hopkinsville, 42240
502-886-5221
Res. 412 W. Riverwood Dr.
Hopkinsville, 42240
502-886-5035
PATH 7026 68

Payne, Gabe A.
Moybelle
Ofc. 1610 So. Moin St.
Hopkinsville, 42240
502-885-8445
Res. Rt. 2
Codiz, 42211
502-924-5483
PD 4105 43

Payne, W. Faxon
Fronces W.
Ofc. Jennie Stuort Hosp.
Hopkinsville, 42240
502-885-3414
Res. 509 Deepwood Drive
Hopkinsville, 42240
502-886-2204
R 4105 48

Pitzer, Frank R.
Ofc. 320 W. 18th St.
Hopkinsville, 42240
Res. Rt. 1
Hopkinsville, 42240
PATH 4106 61

Pois, Allen J.
Constance
Ofc. Jennie Stuort Hospitol
Hopkinsville, 42240
502-886-6570
TS 2007 57

Robertson, Jere C.
Ann
Ofc. 408 W. 17th St.
Hopkinsville, 42240
502-886-3359
Res. 608 Deepwood
Hopkinsville, 42240
502-886-3752
OBG 4106 58

Ross, Charles D.
Anne C.
Ofc. Jennie Stuort Hosp.
Hopkinsville, 42240
502-885-3414
Res. 3233 Circle Drive
Hopkinsville, 42240
502-885-6331
R 4106 68

Rowlett, William M.
Morilyn M.
Ofc. 209 W. 15th St.
Hopkinsville, 42240
502-886-8129
Res. 120 S. Sunset Circle
Hopkinsville, 42240
502-886-8686
OPH 1602 55

Rozelle, James F.
Jeonette
Ofc. 735 North Drive
Hopkinsville, 42240
502-886-5163
Res. 404 Donno Drive
Hopkinsville, 42240
P 4106 61

Shah, Ramnik B.
Ofc. Western St. Hosp.
Box 2200
Hopkinsville, 42240
502-886-4431
Res. Western St. Hosp.
Box 2200
Hopkinsville, 42240
502-885-7362
P 5088 60

Shepherd, Norma T.
Ofc. 212 W. 18th St.
Hopkinsville, 42240
502-886-2651
Res. 200 Ridgehill Drive
Hopkinsville, 42240
502-885-3650
FP 2605 45

Simpson, Jr., James H.
Sondro A.
Ofc. 111 Derrick St.
Hopkinsville, 42240
502-885-4818
Res. 111 Derrick St.
Hopkinsville, 42240
502-886-4941
FP 1602 70

Snowden, Raymond C.
Fronces Morie
Ofc. 1712 High St.
Hopkinsville, 42240
502-886-9431
Res. 2720 Clinton Circle
Hopkinsville, 42240
502-885-9533
FP 1602 44

Snyder, Clarence E.
Cheryl L.
Ofc. Jennie Stuort Medicol Ctr.
Hopkinsville, 42240
502-886-5221
Res. 122 Hunting Creek Court
Hopkinsville, 42240
502-885-5929
EM 1320 62

Spencer, Gary G.
Potricia Ann
Ofc. 1910 Virginio St.
Suite 108
Hopkinsville, 42240
502-886-0490
Res. 203 Edgemont Drive
Hopkinsville, 42240
FP 1602 76

Terhune, J. Nicholas
Morjorie
Ofc. 1611 S. Moin St.
Hopkinsville, 42240
502-885-2780
Res. 216 Donno Dr.
Hopkinsville, 42240
OPH 4105 72

Traughber, Sam H.
Blanche P.
Ofc. 1910 S. Virginio St.
Hopkinsville, 42240
502-886-0251
Res. 1910 S. Virginio St.
Hopkinsville, 42240
502-886-9292
C 1612 65

Turns, Calvin N.
Ofc. Western Stote Hosp.
Hopkinsville, 42240
502-886-4431
Res. Western Stote Hosp.
Hopkinsville, 42240
502-886-0777
P 3709 55

Villarosa, Irene Y.
Juonito V.
Ofc. Western Stote Hosp.
Hopkinsville, 42240
502-886-4431
Res. Western Stote Hosp.
Hopkinsville, 42240
502-885-1328
P 8506 65

Yancey, Charles R.
Elizobeth
Ofc. 3822 Coquino Dr.
Sonibel Islond, FL, 33957
813-472-1725
SU 4105 37

Young, William C.
Shirley A.
Ofc. 1113 Bethel St.
Hopkinsville, 42240
502-886-0143
Res. 408 Deepwood Drive
Hopkinsville, 42240
502-886-8019
PD 4105 60

CLAY

Anama, Emmanual
Ofc. P.O. Box 704
Bonneville, 41314
Res. Bonneville, 41314
606-593-5065
GP

Becknell, William E.
Noncy
Ofc. 203 Moin St.
Monchester, 40962
606-598-5115
Res. 203 Moin St.
Monchester, 40962
606-598-2881
GP 1602 40

Becknell, James L.
Alice
Ofc. 203 Moin St.
Monchester, 40962
606-598-5115
Res. 233 Woyne
Monchester, 40962
606-598-3872
GP 1602 52

Becknell, Jr., Wm. E.
Sue
Ofc. 203½ Moin St.
Monchester, 40962
606-598-5114
Res. 203½ Moin St.
Monchester, 40962
606-598-5066
SU 1612 74

Chu, Caleb H.
Ofc. 401 Memoriol Dr.
Monchester, 40962
606-598-2178
Res. 401 Memoriol Dr.
Monchester, 40962
SU 6103 42

Chu, Priscilla K.
Ofc. 401 Memoriol Dr.
Monchester, 40962
606-598-2178
Res. 401 Memoriol Dr.
Monchester, 40962
PD 3101 60

Langub, Moises P.
Estrello
Ofc. 201½ Moin St.
Monchester, 40962
606-598-8811
Res. 2401 Northfield Ct.
Louisville, 40222
502-426-7821
GP

Life, Darrell D.
Florence M.
Ofc. Red Bird Hosp.
Beverly, 40913
606-598-5135
Res. Beverly, 40913
606-598-5135
FP 1502 64

Lo, Eric Lup-Sing
Elly
Ofc. Memoriol Hospitol
Monchester, 40962
606-598-3517
Res. Route 1, Box 800
Monchester, 40962
606-598-2342
C 5088 76

Rao, Kommineni L.
Vijoyo
Ofc. 205 North 3rd St.
LoGrange, 40031
Res. Route 6, Box 17
Monchester, 40962
606-598-8322
FP 5088 69

Schaeffer, Everett W.
Roberts
Ofc. Red Bird Mission
Beverly, 40913
606-598-5135
Res. Beverly, 40913
606-598-5135
GP 1211 43

Taylor, Cecil E.
Lavino J.
Ofc. Third St.
Monchester, 40962
Res. Memoriol Drive
Monchester, 40962
606-598-5675
R 412 61

Twellman, Dorothy J.
Ofc. Box 185, Route 1
Manchester, 40962
606-598-6100
Res. Route 1, Box 185
Monchester, 40962
606-847-4258
FP 3408 75

Wheeler, Ira F.
Leomio C.
Ofc. Route 5
Monchester, 40962
606-598-5141
Res. Memoriol Drive
Monchester, 40962
606-598-3632
FP 0412 52

CALDWELL

Amos, B. Kirtley
Delio
Ofc. 504 S. Jefferson St.
Princeton, 42445
Res. Princeton, 42445
502-365-6595
SU 4106 33

Cash, Jr., Ralph L.
Ofc. P.O. Box 627
Princeton, 42445
502-365-2037
Res. 39 Cedor Creek Rood
502-365-5530
FP 1602 75

Cash, Sr., Ralph L.
Ofc. P.O. Box 627
Princeton, 42445
502-365-2037
Res. 402 W. Moin
Princeton, 42445
502-365-2822
FP 4105 40

Giannini, Frank P.
Nettie
Ofc. 110 So. Jefferson St.
Princeton, 42445
502-365-5885
Res. 110 S. Jefferson St.
Princeton, 42445
502-365-5885
GP 301 42

Hodge, Robert W.
Sondro
Ofc. 210 No. Seminory
Princeton, 42445
502-365-7577
Res. Rt. #2 Box 15-A
Princeton, 42445
502-365-5511
FP 1602 75

Settle, Lathan E.
Cecile Moore
Ofc. P.O. Box 647
Princeton, 42445
502-365-5502
Res. P.O. Box 627
Princeton, 42445
502-365-9783
FP 4105 71

Talley, Nathaniel H.
Shirley
Ofc. 110 E. Woshington
Princeton, 42445
502-365-2017
Res. 110 E. Woshington
Princeton, 42445
502-365-5658
SU 4105 51

CLARK—CLINTON—CRITTENDEN—CASEY—CARTER—CUMBERLAND—DAVIESS

CLARK

Asher, Bennett N.
Ofc. 120 Professional Ave.
Winchester, 40391
606-744-2485
Res. 230 W. Hickman
Winchester, 40391
606-744-1278
FP 1602 61

Bishop, Marvin E.
Jean
Ofc. 242 W. Lexingtan
Winchester, 40391
606-745-2861
Res. Rt. #6, Box 49
Winchester, 40391
606-744-2158
D 1612 72

Brashear, Robert F.
Lenara F.
Ofc. 246 W. Lexington Ave.
Winchester, 40391
606-744-2732
Res. 459 S. Maple
Winchester, 40391
606-744-6042
FP 1602 54

Guerrant, Edward O.
Julia E.
Ofc. Guerrant Clinic
Winchester, 40391
606-744-2461
Res. 8 Hamptan Avenue
Winchester, 40391
606-744-1221
SU 3441 32

Hamon, Andrew R.
Carrie Haman
Ofc. 1110 McCann Dr., Suite A
Winchester, 40391
606-744-2229
Res. 121 Windridge
Winchester, 40391
606-745-4161
OBG 1602 71

Hubbard, John S.
Jasephine M.
Ofc. 217 Sa. Main St.
Winchester, 40391
606-744-2463
Res. 72 Mackingbird Valley Rd.
Winchester, 40391
606-744-2647
GP 1907 53

Moberly, Harold S.
Ofc. 246 W. Lexingtan Ave.
Winchester, 40391
Res. 110 Ashfard Dr.
Winchester, 40391
FP 1602 55

Scobee, Robert H.
Ofc. 870 Boonesboro Rd.
Winchester, 40391
Res. 870 Boonesbaro Rd.
Winchester, 40391
606-744-1023
PH 3441 26

Snowden, Eugene L.
Ruth G.
Ofc. 113 Sa. Main St.
Winchester, 40391
Res. Skylark Dr.
Winchester, 40391
606-744-6693
GP 1602 47

CLINTON

Barnes, Ernest A.
Kathryn B.
Ofc. 107 Water St.
Albany, 42602
606-387-6428
Res. 107 Water Street
Albany, 42602
606-387-6428
GP 1602 31

Hay, Floyd B.
Rase S.
Ofc. 207 F. Cumberland
Albany, 42602
606-387-6466
Res. 217 Nolan St.
Albany, 42602
606-387-5878
GP 4106 39

Jarvis, James O.
Rizan Y.
Ofc. RR #2
Albany, 42602
606-387-6694
Res. RR #2
Albany, 42602
606-387-5397
IM 1602 79

Powell, William C.
Rita G.
Ofc. 111 Crass St.
Albany, 42602
606-387-6631
Res. 111 Cross Street
Albany, 42602
606-387-6631
FP 1612 73

CRITTENDEN

James, Gary V.
Ofc. 713 Sa. Main St.
Marian, 42064
502-965-5238
FP 1602 77

Maddux, Howard Gregory
Ofc. 713 Sa. Main St.
Marion, 42064
502-965-5238
FP 1602 76

CASEY

Adams, Kearney R.
Vialet R.
Ofc. P.O. Bax Q
Liberty, 42539
Res. P.O. Bax Q
Liberty, 42539
606-787-7105
GP 3108 45

Cornett, Cathryn V.
Hubert
Ofc. Caunty Health Dept.
Liberty, 42539
606-787-6911
Res. Box H
Liberty, 42539
606-787-7685
PH 4106 50

Price, John R.
Terry W.
Ofc. Rt. 6, Box 2
Liberty, 42539
606-787-6246
Res. Rt. 2, Adams Street
Liberty, 42539
606-787-9521
FP 1612 74

Sweeney, Garnett J.
Virginia
Ofc. Rt. 2, Box 569
Liberty, 42539
606-787-8348
Res. Rt. 6, Box 251
Liberty, 42539
606-787-6725
FP 1602 39

Sweeney, George W.
Mollie
Ofc. Rt. 2, Box 569
Liberty, 42539
606-787-8348
Res. Rt. 4, Box 10A
Liberty, 42539
606-787-7185
GP 1602 51

Wesley, Lewis E.
Elaine
Ofc. Adams St.
Liberty, 42539
606-787-8348
Res. P.O. Bax 39
Liberty, 42539
606-787-7235
GP 1602 56

CARTER

Lewis, Paul R.
Ofc. Scatt St.
Olive Hill, 41164
Res. Scott Street
Olive Hill, 41164
GP 1602 65

Matthew, William H.
Clyda
Ofc. Carter Caunty Clinic
Graysan, 41143
Res. Rt. #1, Bax 104
Graysan, 41143
606-474-7045
FP 1602 69

Shufflebarger, Harold
Hazel
Ofc. P.O. Bax 548
Graysan, 41143
606-474-5105
Res. 710 E. Main Street
Graysan, 41143
606-474-5950
GP 1602 52

CUMBERLAND

Reckmann, Heimo
Susan
Ofc. P.O. Bax 145
Columbia, 42728
Res. Greensburg Raad
Columbia, 42728
502-384-3803
R 6807 45

Rice, Samuel Lee
Patricia
Ofc. P.O. Bax 809
Burkesville, 42717
502-864-5102
Res. P.O. Bax 809
Burkesville, 42717
FP 4501 76

Schickel, Joseph
Dorothy
Ofc. 11681 68th Ave. No.
Seminale, FL, 33542
Res. P.O. Bax 217
Burkesville, 42717
GP 1602 39

Skipworth, Joseph D.
Mary B.
Ofc. Box AA
Burkesville, 42717
502-864-3894
FP 1602 74

DAVIESS

Abshier, W. Mark
Martha
Ofc. 1102 Triplett St.
Suite 2300
Owensbara, 42301
502-684-2984
Res. 4434 Taylar Dr.
Owensbaro, 42301
502-685-1029
IM 1602 71

Anderson, James E.
June
Ofc. P.O. Bax 1441
Owensbara, 42301
502-683-2441
Res. 2145 Fieldcrest Dr.
Owensboro, 42301
502-926-4070
SU 4106 56

Ball, Coy E.
Trilby
Ofc. 2816 Veach Rd.
Owensbara, 42301
502-926-8560
Res. 2124 Griffith Ave.
Owensbora, 42301
502-684-4779
GP 1602 61

Baumgarten, James A.
Dorothy
Ofc. P.O. Box 570
Owensbara, 42301
502-683-1151
Res. 1228 Cary Ct.
Owensbaro, 42301
502-684-7438
R 4806 56

DAVIESS

Bensman, Irvin
Morie E.
Ofc. 1343 S.W. Walnut Terroce
Boco Roton, FL, 33432
Res. 1343 S.W. Walnut Terroce
Boco Roton, FL, 33432
305-368-4838
U 4806 33

Bickel, John E.
Groce
Ofc. 1700 Frederico
Owensboro, 42301
502-683-3232
Res. 1235 Woodmere Ln.
Owensboro, 42301
502-683-3901
PD 1602 44

Binegar, Garry N.
Gretchen
Ofc. 2816 Veach Rd.
Owensboro, 42301
502-926-3297
Res. 29 Stone Creek Pork
Owensboro, 42301
502-926-8759
OPH 3441 66

Blackstone, Jr., Jack C.
Pomelo F.
Ofc. 1203 Center St.
Owensboro, 42301
502-926-7377
Res. 4119 Fox Run Lone
Owensboro, 42301
502-926-4122
OBG 1320 74

Blackstone, Sr., Jack C.
Pom
Ofc. 1203 Center St.
Owensboro, 42301
502-926-3700
Res. 1103 Woodmere Lane
Owensboro, 42301
OBG 1320 42

Bushong, William D.
Lindo
Ofc. 2816 Veoch Rd.
Owensboro, 42301
502-926-1164
Res. 1227 Forrier Pl.
Owensboro, 42301
502-926-1106
PD 1602 57

Byrd, Robert D.
Rochel A.
Ofc. Box 914, Rt. #2
Lewisport, 42351
502-685-0216
Res. 2410 Frederico
Owensboro, 42301
FP 1602 73

Callis, James H.
Koren
Ofc. Moyfoir Squore Bldg.
Owensboro, 42301
502-684-5616
Res. 2817 Western Porkwoy
Owensboro, 42301
FP 1602 56

Carothers, James E.
Koren C.
Ofc. 2816 Veoch Rd.
Owensboro, 42301
502-926-4100
Res. 2126 Sheridon Ploce
Owensboro, 42301
502-683-0052
ORS 4806 76

Clark, Ritchie L.
Debbie
Ofc. 819 E. 9th St.
Owensboro, 42301
502-684-2388
Res. 1908 Fieldcrest Drive
Owensboro, 42301
502-684-8633
PATH 1320 77

Collings, Jack C.
Mory Boyd
Ofc. 2816 Veach Rd.
Owensboro, 42301
502-926-8585
Res. 2122 Cedor St.
Owensboro, 42301
502-926-8999
FP 1602 55

Cox, Randy
Ofc. 1001 Center St. #16
Owensboro, 42301
N 1320 76

Dalzell, Jr., Robert C.
Kothy
Ofc. 2816 Veoch Rd.
Owensboro, 42301
Res. 1236 Laurel Drive
Owensboro, 42301
FP 1602 72

Davis, Howell J.
Evelyn
Ofc. Box 1441
1102 Triplett St.
Owensboro, 42301
502-683-2441
Res. Veoch Rd.
Owensboro, 42301
502-683-7066
SU 3701 33

Dawson, Royce E.
Lucy
Ofc. 1102 Triplett St.
Box 1441
Owensboro, 42302
Res. 1607 Fown Dr.
Owensboro, 42301
502-683-8902
TS 4105 52

DunLany, Samuel C.
Kothleen
Ofc. 2309 Moyfoir Dr.
Owensboro, 42301
502-684-5267
Res. 2222 N. Strotford
Owensboro, 42301
IM 1602 73

Edds, Gerald G.
Ofc. 2816 Veoch Rd.
Owensboro, 42301
502-926-4175
OTO 1602 76

Farrell, William F.
Brendo
Ofc. 2816 Veoch Rd.
Owensboro, 42301
502-684-3879
Res. 17 Stone Creek Pork
Owensboro, 42301
502-685-2281
D 1602 64

Fuqua, William R.
Shirley
Ofc. 2816 Veach Rd.
Owensboro, 42301
502-926-4100
Res. 4044 Kensington Pl.
Owensboro, 42301
502-926-1508
ORS 1602 58

Furgason, Thomas G.
Potricio B.
Ofc. 330 Allen St.
Owensboro, 42301
502-683-6242
Res. 4701 Loftwood Drive
Owensboro, 42301
502-926-4703
FP 1612 73

Gabbert, William R.
Betty Deon
Ofc. 819 E. 9th St.
Owensboro, 42301
502-684-1524
Res. 1500 Robin Road
Owensboro, 42301
502-683-4303
PD 3205 46

Gearhart, Elmer A.
Tommie
Ofc. 819 E. Ninth St.
Owensboro, 42301
502-683-5601
Res. 2334 Bulfinch Ave.
Owensboro, 42301
502-684-6156
IM 4106 41

Gilbert, Sr., Wendell N.
Vickie
Ofc. 725 Horvord Dr.
Owensboro, 42301
502-926-9966
Res. 411 Wildwood Drive
Owensboro, 42301
502-683-5886
FP 2301 68

Greene, R. Glenn
Ofc. 1102 Triplett St.
Owensboro, 42301
502-926-1650
Res. 4018 Chapel Lone
Owensboro, 42301
502-926-1555
IM 4105 54

Hall, William W.
Mory
Ofc. Moyfoir Squore
Owensboro, 42301
502-684-6255
Res. 1803 Oxford Drive
Owensboro, 42301
502-926-2326
GP 1602 54

Hanekamp, Edwin H.
Mory Carol
Ofc. Moyfoir Bldg. #2
Owensboro, 42301
502-683-1244
Res. 2547 Christie Place
Owensboro, 42301
502-683-2794
OBG 2434 56

Hast, Robert L.
Corolyn
Ofc. 2309 Moyfoir Dr.
Owensboro, 42301
502-684-5267
Res. 2128 Clinton Pl. W.
Owensboro, 42301
502-926-8093
IM 1320 54

Havelda, Christopher J.
Mory
Ofc. 2816 Veoch Rd., Suite #6
Owensboro, 42301
502-589-4668
Res. 1306 Woodmere Lone
Owensboro, 42301
502-426-2283
C 6605 73

Hayden, William G.
Debbie
Ofc. 1001 Center St. #121
Owensboro, 42301
502-926-1336
Res. 1400 Woodbridge Tr.
Owensboro, 42301
502-926-9742
SU 1602 69

Henry, Carl
Ofc. RR 3, P.O. Box 10
Philpot, 42366
502-729-4682
Res. Philpot, 42366
502-729-4682
P 1602 52

Hofer, Jeffrey S.
Lynn M.
Ofc. 2816 Veach Rd. #102
Owensboro, 42301
502-684-1145
Res. 2608 Doneroil Dr.
Owensboro, 42301
IM 2403 78

Hopwood, Anne H.
Ofc. 421 Allen St.
Owensboro, 42301
502-684-1933
Res. 2020 St. Elizobeth
Owensboro, 42301
502-683-3045
IM 1320 40

Howard, Carroll E.
Morgoret S.
Ofc. 1700 Frederica St.
Owensboro, 42301
502-684-0616
Res. 2140 Crestwood Dr.
Owensboro, 42301
502-683-8202
PD 2434 61

DAVIESS

Jansing, C. William
Esther
Ofc. Box 1441
Owensboro, 42301
502-683-2441
Res. 2303 Agile Ct.
Owensboro, 42301
SU 3120 62

Jarvis, Michael
Borboro
Ofc. 2816 Veoch Rd., Suite 6
Owensboro, 42301
502-685-4203
Res. 1911 Fieldcrest
Owensboro, 42301
502-926-1642
IM 1602 68

Jarvis, Angela L.
Dr. J. M. Kevolus
Ofc. 2816 Veoch Rd.
Owensboro, 42301
502-683-5391
Res. 2114 Southwestern Pkwy.
Owensboro, 42301
502-683-6593
IM 1612 74

Jefferies, John D.
Vivienne
Ofc. 2816 Veoch Rd.
Suite 304
Owensboro, 42301
502-684-1918
Res. Rt. 3, Veoch Rd.
Owensboro, 42301
U 6601 53

Johnson, Ann H.
Ofc. Suite 4
Moyfoir Sq. Bldg.
Owensboro, 42301
502-926-2770
Res. 2742 Western Porkway
Owensboro, 42301
502-926-1250
PD 1602 51

Johnson, Ronald M.
Beverly
Ofc. Moyfoir Sq. Bldg.
Owensboro, 42301
502-926-3600
Res. 4421 Taylor Drive
Owensboro, 42301
502-926-9686
FP 1602 72

Jones, David E.
Morgoret
Ofc. 2816 Veoch Rd.
Owensboro, 42301
502-926-3297
Res. 1930 Fown Dr.
Owensboro, 42301
502-926-5026
OPH 1602 77

Joslin, Albert H.
Sue
Ofc. 1001 Center St.
Owensboro, 42301
502-684-3265
Res. 38 Stone Creek Pk.
Owensboro, 42301
502-926-4580
U 1602 54

Kavolus, Joseph M.
Angelo L.
Ofc. 2816 Veach Rd.
Owensboro, 42301
502-683-3557
Res. 2114 Southeostern Pkwy.
Owensboro, 42301
502-683-6593
ORS 1612 70

Keeley, John C.
Flo
Ofc. 1001 Center St.
Owensboro, 42301
502-684-6279
Res. 1415 Ford Ave.
Owensboro, 42301
502-683-9787
FP 1602 45

Kim, Suk Ki
Kuizo
Ofc. 3506 Aristides Dr.
Owensboro, 42301
502-684-5679
Res. Owensboro, 42301
502-684-0571
ANES 7606 67

Kim, Young Sook
Young Ki Kim
Ofc. 3041 Veoch Rd.
P.O. Box 2532
Owensboro, 42302
502-683-2071
Res. 4162 Fox Run Lone
Owensboro, 42301
502-683-9283
ANES 7607 74

Lacy, Clint M.
Helen Mory
Ofc. 1915 Moyfoir Dr.
Owensboro, 42301
Res. 1915 Moyfoir Dr.
Owensboro, 42301
OBG 1602 42

Loucks, John D.
Marno
Ofc. 2816 Veach Rd.
Owensboro, 42301
Res. 4219 Hunter Pointe
Owensboro, 42301
OTO 4701 70

Lovett, John D.
Louiso
Ofc. 1700 Frederico St.
Owensboro, 42301
502-926-2666
Res. 1120 Griffith Ave.
Owensbaro, 42301
502-926-1210
IM 3440 50

Lowry, Clifton E.
Jonice
Ofc. 1001 Center
Owensboro, 42301
502-684-2986
Res. 2319 Corter Rd.
Owensboro, 42301
SU 1602 53

Madauss, William Carl
Kathleen
Ofc. 1001 Center St.
Owensbora, 42301
502-926-0700
Res. 2102 Griffith Avenue
Owensbaro, 42301
NS 1612 70

Maddox, Jr., Tom S.
Jackie
Ofc. 2816 Veach Rd.
Owensbara, 42301
502-926-3297
Res. 1210 Griffith Ave.
Owensboro, 42301
502-926-3683
OPH 1612 69

McCormack, William M.
Ann
Ofc. Box 570
Owensboro, 42301
502-684-2512
Res. 1425 Hunting Creek
Owensboro, 42301
502-684-0245
R 1602 61

McKay, John A.
Martha
Ofc. 2816 Veoch Rd.
Owensboro, 42301
Res. 32 Stone Creek Pork
Owensboro, 42301
ORS 1602 59

McKelvey, Charles H.
Corolyn
Ofc. 4130 Hunting Creek Dr.
Owensbora, 42301
502-685-5534
Res. 4130 Hunting Creek Dr.
Owensboro, 42301
502-684-2739
U 3440 63

McManus, William A.
Ann
Ofc. Box 1441
1102 Triplett St.
Owensbora, 42301
502-683-2441
Res. 2009 Old Cobin Rd.
Owensboro, 42301
502-684-3759
SU 1602 53

Medley, Jr., R. Wathen
Ofc. 1102 Triplett St.
Owensboro, 42301
502-685-2979
Res. 1730 McCreary Ave.
Owensboro, 42301
502-684-8314
IM 1701 63

Moore, Loran P.
Solly
Ofc. 1001 Center St.
Owensboro, 42301
502-683-4068
Res. 1633 Griffith Ave.
Owensbaro, 42301
502-683-8807
OPH 1602 40

Myers, Wayne C.
Charlene
Ofc. Box 570
Owensboro, 42301
502-683-1151
Res. 1425 Hickary Ln.
Owensboro, 42301
502-926-8052
R 4106 68

Neel, Donald R.
Foye
Ofc. 2816 Veach Rd.
Owensboro, 42301
502-926-9812
Res. 3 Stone Creek Park
Owensboro, 42301
502-926-4812
PD 1612 64

Newton, Jack R.
Morgoret
Ofc. 2816 Veach Rd.
Owensboro, 42301
502-926-8220
Res. Route 1
6049 Highwoy 1389
Owensboro, 42301
502-281-5783
OBG 1001 70

Nguyen, Chat V.
Khanh Bui
Ofc. 819 E. Ninth St.
Owensboro, 42301
502-926-7077
Res. 846 Mason Court
Owensboro, 42301
502-684-7034
FP 5088 59

O'Bryan, William Martin
Anne
Ofc. 1102 Triplett St.
Suite 1300
Owensboro, 42301
502-926-8810
Res. 2139 North Strotford Dr.
Owensboro, 42301
502-685-5737
PUD 1612 76

O'Neill, Patrick A.
Penny
Ofc. Doviess Co. Hosp.
Owensboro, 42301
502-926-0222
Res. 134 Tennyson Drive
Owensbora, 42301
502-685-0316
GP 1602 55

Oelze, Russell
Doris Ann
Ofc. 819 E. 9th St.
Owensboro, 42301
502-926-6396
Res. 2024 Bittel Rood
Owensboro, 42301
ANES 4212 68

Oldham, William J.
Cloro
Ofc. 301 Mognolio Dr.
Owensboro, 42301
Res. 301 Mognolio Dr.
Owensboro, 42301
502-926-8989
ENT 1602 40

DAVIESS

Orrahood, M. David
Joyce
Ofc. 2725 Frederico St.
Owensboro, 42301
502-926-3030
Res. 2725 Frederico St.
Owensboro, 42301
502-684-3334
PATH 2001 47

Padgett, W. Neil
Anne
Ofc. 819 E. Ninth St.
Owensboro, 42301
502-926-8787
Res. 1615 Griffith Avenue
Owensboro, 42301
502-926-2082
OBG 3901 63

Park, III, Frederic C.
Ann
Ofc. Box 570
Owensboro, 42301
502-683-1151
Res. 1420 Hunting Creek Dr.
Owensboro, 42301
502-926-1053
R 1602 77

Parks, Sara J.
Ofc. 330 Allen St.
Owensboro, 42301
502-683-6088
Res. 2134 Bittel Road
Owensboro, 42301
FP 3709 49

Pearson, William E.
Sara
Ofc. 1001 Center St.
Owensboro, 42301
502-926-9949
Res. 37 Stone Creek Pork
Owensboro, 42301
502-926-9843
NS 1602 59

Phillips, Reginald J.
Morgoret
Ofc. 1001 Center St.
Owensboro, 42301
502-684-5102
Res. 2104 Merriewood Drive
Owensboro, 42301
502-684-5124
SU 1602 48

Poppens, Clifford A.
Ofc. 2816 Veoch Rd.
Owensboro, 42301
Res. 1418 Stondish Ploce
Owensboro, 42301
IM 2007 75

Prajapati, Dattatraya S.
Rita
Ofc. 1700 Frederica St.
Owensboro, 42301
502-926-7575
Res. 1703 Bluegross Ct., Apt. A
Owensboro, 42301
502-685-3321
IM 7003 73

Quader, Anwarul
Ofc. 1700 Frederica St. #203
Owensboro, 42301
502-684-3247
Res. 3854 S. Griffith
Owensboro, 42301
502-926-8570
ORS 5401 62

Rayburn, Mack
Jane
Ofc. 1001 Center St.
Owensboro, 42301
502-684-5242
Res. 1690 Roosevelt Rd.
Owensboro, 42301
502-684-5316
OTO 1602 43

Reich, David R.
Kim Alexander
Ofc. 1001 Center St.
Owensboro, 42301
502-926-6864
Res. Route 1
Utico, 42376
N 3501 74

Reid, Robert L.
Bettye
Ofc. 2816 Veach Rd.
Owensboro, 42301
502-926-4100
Res. 1504 College Dr.
Owensboro, 42301
502-926-0437
ORS 1602 56

Reynolds, Jr., Fred C.
Bonnie
Ofc. 1001 Center St.
Owensboro, 42301
502-683-3364
Res. Route #1, Jones Rood
Owensboro, 42301
502-281-4826
ANES 4106 47

Richards, Glen D.
Ofc. 1 Executive Blvd.
Suite LL-5
Owensboro, 42301
502-684-1560
Res. 1855 Aspenwood Drive
Owensboro, 42301
502-926-3195
ANES 1602 63

Riddle, Bruce W.
Solly R.
Ofc. 2816 Veoch Rd.
Owensboro, 42301
502-684-5267
Res. 1114 Booth Ave.
Owensboro, 42301
502-684-8543
IM 1320 77

Riherd, Leslie M.
Mory Alice
Ofc. 2816 Veoch Rd.
Owensboro, 42301
502-926-4100
Res. 1510 Hunting Creek Dr.
Owensboro, 42301
502-926-8531
ORS 301 67

Roache, Fred B.
Ofc. 227 W. Ninth
Owensboro, 42301
502-683-1383
Res. 1505 Linden Avenue
Owensboro, 42301
502-683-1268
GP 801 34

Ross, J. Russell
Brendo
Ofc. 2816 Veach Rd.
Owensboro, 42301
502-684-9218
Res. 10 Stone Creek Pork
Owensboro, 42301
502-684-3313
U 1602 67

Sanders, Marilyn M.
R. John
Ofc. 1102 Triplett St.
Owensboro, 42301
502-684-0203
Res. 2 Stone Creek Pork
Owensboro, 42301
502-684-0203
IM 1602 58

Sanders, Roma J.
Morilyn
Ofc. Suite 2200
1102 Triplett St.
Owensboro, 42301
502-684-0203
Res. 2 Stone Creek Pork
Owensboro, 42301
502-684-0203
SU 902 61

Schell, Merrell W.
Evelyn
Ofc. 1001 Center St.
Owensboro, 42301
502-683-3720
Res. 1624 Alderson Court
Owensboro, 42301
502-684-3728
SU 4105 46

Schell, Robert H.
Mory
Ofc. 1001 Center St.
Owensboro, 42301
502-683-3720
Res. RR 1
Philpot, 42366
502-281-4034
SU 4105 74

Schmitt, Catherine A.
Ofc. 1203 Center St.
Owensboro, 42301
502-926-7377
Res. 1300 Woodbridge Troil
Owensboro, 42301
OBG 1320 76

Schupbach, Harold J.
Mory
Ofc. 1001 Center St.
Owensboro, 42301
502-684-6292
Res. 14 Stone Creek Park
Route 2
Owensboro, 42301
502-683-7764
IM 3406 47

Skaggs, Rodney A.
Ofc. Mayfair Sq. Bldg.
Owensboro, 42301
Res. 16 Moyfoir Squore
Owensboro, 42301
P 1612 76

Smock, Jr., E. Frederic
Ofc. P.O. Box 570
Owensboro, 42301
502-683-1151
Res. 502-926-2926
Owensboro, 42301
502-926-2946
R 1602 58

Stevens, Elliott P.
Ginny
Ofc. 1001 Center St.
Owensboro, 42301
Res. 2042 Fieldcrest Dr.
Owensboro, 42301
IM 1602 43

Stiles, Joseph C.
Noncy F.
Ofc. 2816 Veoch Rd.
Suite 307
Owensboro, 42301
502-683-3538
Res. 1031 Griffith Ave.
Owensboro, 42301
502-926-1611
ORS 1602 57

Tuttle, William M.
Ofc. Moyfoir Squore
Prof. Bldg. #15
Owensboro, 42301
502-683-1196
Res. 123 Cinderello Drive
Owensboro, 42301
502-683-3787
D 2402 70

Tyler, III, William L.
Susie
Ofc. 2309 Moyfair Dr.
Owensboro, 42301
Res. 1256 Lourel Dr.
Owensboro, 42301
502-683-3256
IM 1320 65

Ward, William G.
Ofc. Moyfoir Medicol Ctr.
Owensboro, 42301
502-684-6255
Res. 1402 Hickory Lone
Owensboro, 42301
502-684-6404
FP 1602 57

Warren, Bryan P.
Jone W.
Ofc. Moyfoir Sq. #12
Owensboro, 42301
502-685-3402
Res. 1610 Anter Avenue
Owensboro, 42301
502-684-5543
P 1901 52

Westerfield, Lowell K.
Phyllis
Ofc. Moyfoir Sq. Suite 3
Owensboro, 42301
502-926-1150
Res. 2436 Foirview Drive
Owensboro, 42301
502-685-3285
GP 1602 68

Wigginton, Larry S.
Ofc. 819 E. Ninth St.
Owensboro, 42301
502-926-8222
Res. 4615 Doe Run
Owensboro, 42301
502-926-1244
OBG 1612 67

Wight, Frank H.
Yvonne
Ofc. 1562 Ook Pork Dr.
Owensboro, 42301
Res. 1562 Ook Pork Dr.
Owensboro, 42301
502-864-3959
R 1602 52

Wilson, Jr., Charles O.
Ann
Ofc. P.O. Box 2119
Owensboro, 42302
Res. Route 2
Utico, 42376
PATH 1612 65

Woolfolk, William Louis
Julio
Ofc. 2119 Frederica St.
Owensboro, 42301
Res. 2119 Frederico St.
Owensboro, 42301
502-683-4656
ENT 3701 29

Yarbrough, Frank L.
Jo
Ofc. 2309 Moyfoir Dr.
Owensboro, 42301
502-684-5267
Res. 4450 Green Acres Drive
Owensboro, 42301
502-683-8391
IM 1602 49

EDMONSON

Bhatt, Omkar N.
Prono
Ofc. Wilkes Clinic, Box 367
Brownsville, 42210
502-597-2155
Res. Jockson Street
Brownsville, 42210
502-782-8755
FP 7016 65

Collins, Michael J.
Suson
Ofc. Wilkes Clinic
Brownsville, 42210
Res. 2520 Thoroughbred
Bowling Green, 42101
FP

Farmer, Sidney E.
Martha J.
Ofc. Brownsville, 42210
Res. Brownsville, 42210
502-597-2310
FP 1602 47

Wilkes, Marcus B.
Jean
Ofc. Wilkes Bldg.
Brownsville, 42210
502-597-2155
Res. 1817 East Main Street
Brownsville, 42210
502-597-3337
GP 2015 57

ELLIOTT

Adkins, Brown L.
Ofc. P.O. Box 768
Sondy Hook, 41171
606-738-5365
Res. Sandy Hook, 41171
606-738-6797
GP 1602 64

Greene, John F.
Georgia
Ofc. Rt. 1, Box 818
Sondy Hook, 41171
606-738-6800
Res. Rt. 1, Box 1036
Sandy Hook, 41171
606-738-6930
IM 1602 44

Greene, Michael D.
Cindro L.
Ofc. Rt. 1, Box 818
Sandy Hook, 41171
606-738-6800
Res. Rt. #1, Box 818
Sondy Hook, 41171
606-738-5950
GP 412 75

ESTILL

Terry, Charles E.
Brendo
Ofc. 275 N. Court St.
Irvine, 40336
606-723-2167
Res. 208 Broodwoy
Irvine, 40336
606-723-4466
GP 4105 65

Wallace, Virginia
Ofc. 275 Court St.
Irvine, 40336
606-723-2167
Res. 100 Fronces Street
Irvine, 40336
606-723-2828
GP 3701 36

FAYETTE

Adams, Theodore L.
Mory
Ofc. 141 Bell Ct. West
Lexington, 40508
Res. 141 Bell Ct. West
Lexington, 40508
606-252-0690
IM 4105 31

Adams, W. Lloyd
Lillion
Ofc. 167 W. Moin, Suite 1404
Lexington, 40507
606-252-7477
Res. 163 Bossett Avenue
Lexington, 40502
606-266-5313
OPH 3103 46

Akaydin, Mehmet S.
Ferdinande
Ofc. 2533 Lorkin Rd.
Lexington, 40503
606-278-2913
Res. 3317 Broemer Drive
Lexington, 40502
606-278-4387
P 9302 46

Allen, John M.
Dorothy
Ofc. 2101 Nicholosville Rd.
#203
Lexington, 40503
606-278-9555
Res. 429 Molobu Drive
Lexington, 40502
606-277-4574
SU 1602 54

Allen, L. Chase
Sue
Ofc. 2368 Nicholosville Rd.
Lexington, 40503
606-278-0386
Res. 3344 Bellefonte Drive
Lexington, 40502
606-277-7476
PS 1602 58

Allen, John R.
Robin V.
Ofc. Suite 104
135 E. Moxwell St.
Lexington, 40508
606-253-1042
Res. 151 Eastover Dr.
Lexington, 40502
606-266-8504
ORS 1612 72

Allen, William C.
Phyllis
Ofc. 3320 Totes Creek Rd.
Suite 202
Lexington, 40502
606-268-1030
Res. 3332 Carrioge Lone
Lexington, 40502
606-272-7094
ANES 4106 74

Alley, Rufus C.
Ofc. 209 Chinoe Rd.
Lexington, 40502
Res. 209 Chinoe Rood
Lexington, 40502
606-266-5583
27

Alonso, Andres
Georgino M.
Ofc. 1725 Harrodsburg Rd.
Lexington, 40504
606-278-4302
Res. 664 Teakwood Drive
Lexington, 40504
606-269-1172
IM 8904 54

Anderson, Jerry E.
Suson
Ofc. 310 S. Limestone
Lexington, 40508
606-254-2778
Res. 239 Queenswoy Dr.
Lexington, 40502
R 2434 68

Anderson, James W.
Goy
Ofc. VA Medicol Center
Lexington, 40511
606-233-4511
Res. 1872 Bloirmore Road
Lexington, 40502
IM 1206 61

Angelucci, Ralph J.
Bennette
Ofc. 2101 Nicholosville Rd.
Lexington, 40503
606-277-5791
Res. 5184 Totes Creek Pike
Lexington, 40503
606-272-6208
NS 4105 38

Anzures, Humildad T.
Antonio S.
Ofc. 2101 Nicholosville Rd.
Lexington, 40503
606-277-3114
Res. 3542 Julionn Circle
Lexington, 40503
606-223-1575
PD 5088 57

Apesos, James
Liz
Ofc. UKMC Plostic Su. MN 275
Lexington, 40536
606-233-5887
PS

Archer, Raleigh R.
Carol
Ofc. 1725 Horrodsburg Rd.
Lexington, 40504
606-278-2334
Res. 1600 Foirwoy Dr.
Lexington, 40502
606-266-3262
PS 1612 65

FAYETTE

Ash, Robert C.
Ofc. UKMC, Med. Hem/Onc
MS 681
Lexingtan, 40536
606-233-4511
Res. 947 Edgewater Drive
Lexington, 40502
606-269-7408
H 2403 75

Aug, Robert G.
Ofc. 634 Sayre Ave.
Lexington, 40508
P 3441 55

Avila-Orlandi, Jose A.
Lina
Ofc. 1517 So. Limestone
Lexington, 40503
606-278-5479
Res. 987 Edgewater
Lexingtan, 40502
606-266-2210
R 8901 62

Baehler, Richard W.
Rosanne
Ofc. 169 Burt Rd.
Suite C ond D
Lexington, 40503
606-276-5355
Res. 2059 Von List Woy
Lexington, 40502
606-269-2583
IM 4803 69

Bain, Robert S.
Bette
Ofc. 1 St. Joseph Dr.
Lexington, 40504
606-278-3436
Res. 3186 Burnhom Ct.
Lexington, 40503
606-277-3430
R 4106 56

Baker, James W.
Brendo
Ofc. 2011 Rambler Rd.
Lexingtan, 40503
606-278-2781
Res. 800 Lokeshore Dr.
Lexington, 40502
606-266-3393
OBG 4701 68

Baldwin, John B.
Ofc. 422 Codell Dr.
Lexington, 40509
606-269-5637
Res. 303 Chippendole Circle
Lexington, 40502
606-255-3636
FP 1612 70

Ballard, Joseph A.
Mory
Ofc. 406 Adoir Rd.
Lexington, 40502
Res. 406 Adoir Rd.
Lexington, 40502
606-269-8976
OTO 2434 45

Ballard, Ted D.
Elizobeth
Ofc. 1495 Leestown Rd.
Lexington, 40505
606-255-4942
Res. 1720 Williomsburg Rood
Lexington, 40504
606-255-4942
FP 1602 61

Balthrop, John E.
Kathryn K.
Ofc. 1221 S. Braadway
Lexington, 40504
606-255-6841
Res. 1221 Scoville Rood
Lexington, 40502
606-269-1737
ORS 902 77

Bard, James W.
Elaine
Ofc. Lexingtan Clinic
Lexington, 40504
606-255-6841
Res. 2044 Monor Dr.
Lexington, 40502
606-269-6128
D 4806 58

Bark, Joseph P.
Lindo
Ofc. 1517 So. Limestone
Lexingtan, 40503
606-278-9492
Res. 2185 Islond Drive
Lexington, 40502
606-269-5571
D 1612 72

Bass, Norman H.
Ofc. UKMC-Neurology
Lexington, 40536
606-233-5661
N 0601 62

Bean, James R.
Debbie
Ofc. 152 W. Zondole
Lexington, 40503
606-233-5861
Res. 311 Hort Rd.
Lexington, 40502
606-269-3937
NS 1701 73

Beatty, C. Patrick
Deborah
Ofc. Citizens Bank Squore
Lexington, 40507
606-254-0309
Res. 920 Bravington Woy
Lexington, 40503
606-223-2718
ANES 1612 67

Belin, Robert P.
Ja
Ofc. 2366 Nichalosville Rd.
Lexington, 40503
606-277-5778
Res. 2144 Islond Dr.
Lexington, 40502
606-269-7776
SU 2007 62

Bell, Richard M.
Debbie
Ofc. UKMC, Surgery
Lexington, 40536
606-233-6647
Res. 1363 Strawberry Lane
Lexington, 40502
606-269-2122
SU 1612 72

Bergsma, Donald R.
Claudio
Ofc. Ophtholmology
Lexingtan, 40536
606-233-5868
Res. 744 Lokeshore Dr.
Lexington, 40502
606-269-4309
OPH 3101 65

Bernard, Joe D.
Libby
Ofc. 1740 S. Limestane
Lexington, 40503
606-278-2001
Res. 638 Tateswood Dr.
Lexington, 40502
606-269-1452
R 1602 59

Bingcang, Benigno P.
Carnelia
Ofc. 3320 Totes Creek
Lexington, 40502
606-268-1040
Res. Box 132X, Route 5
Vince Rood
Nicha!asville, 40356
606-885-3057
ANES 8502 70

Birenbaum, Georges
Mory
Ofc. 101 Malobu Dr.
Lexingtan, 40503
606-278-9486
Res. 3029 Shirlee Court
Lexington, 40502
606-277-9571
OPH 1612 67

Blackburn, Jr., William E.
Lindo E.
Ofc. 2101 Nicholasville Rd.
Lexington, 40503
606-277-5766
Res. 173 Cherokee Park
Lexington, 40503
606-278-1486
U 1612 69

Blakey, Leslie W.
Fredo
Ofc. 672 Mt. Vernon Dr.
Lexington, 40502
606-255-6841
Res. 672 Mt. Vernon Dr.
Lexington, 40502
606-266-5961
N 1602 47

Blaydes, M. Cary
Nancy
Ofc. 122 S. Broadwoy
Lexington Clinic
Lexington, 40504
606-255-6841
Res. 471 Woodloke Woy
Lexington, 40502
606-266-6143
IM 4501 54

Blevins, Phillip K.
Mory Jo
Ofc. 1725 Horrodsburg Rd.
Suite 201
Lexington, 40504
606-278-9439
Res. 294 S. Ashland Ave.
Lexington, 40502
606-266-5623
PS 1612 67

Blount, Rankin C.
Emily
Ofc. 840 Malobu Dr. #210
Lexington, 40502
Res. 840 Molobu Drive, #106
Lexington, 40502
606-266-0991
IM 4105 33

Boarman, Christopher A.
Dono
Ofc. 2101 Nicholasville Rd.
#306
Lexington, 40503
606-276-5437
Res. 1257 Tishoff Dr.
Lexington, 40502
PD 1612 73

Bobys, Stephen M.
Maxine
Ofc. 1517 S. Limestone
Lexington, 40503
606-277-5736
Res. 3814 Brandon Dr.
Lexington, 40502
606-266-4904
OBG 4504 71

Boettner, Robert Barney
Ofc. UKMC, ANES
Lexington, 40536
ANES 3406 55

Bongiorno, Felix J.
Ofc. 2368 Nicholosville Rd.
Lexington, 40503
606-278-9443
Res. 3453 Keithshire
Lexington, 40503
606-278-4257
OPH 4805 64

Boso, John E.
Marsholl
Ofc. 2012 Bridgeport Dr.
Lexington, 40502
606-254-0309
Res. 2012 Bridgeport Dr.
Lexington, 40502
606-269-2121
ANES 4701 69

FAYETTE

Bosomworth, Peter P.
Jady
Ofc. Chancellar far the Med. Ctr.
Lexingtan, 40536
606-233-5126
Res. 3314 Braakhill Circle
Lexingtan, 40502
606-278-5690
ANES 3441 55

Boswell, Walter L.
Betty
Ofc. St. Jaseph Hasp. Radialagy
Lexingtan, 40504
606-278-3436
Res. Delaney Ferry Rd., Rt. 4
Versailles, 40383
606-873-8816
R 4106 42

Bosworth, N. Lewis
Virginia
Ofc. 2101 Nichalasville Rd.
#102
Lexingtan, 40503
606-277-5035
Res. 1701 Fincastle Raad
Lexingtan, 40502
606-266-1244
U 4501 33

Bottiggi, James A.
Kay
Ofc. 1221 S. Braadway
Lexingtan, 40504
606-255-6841
Res. 4181 Farsythe Drive
Lexingtan, 40503
606-223-4397
PD 4402 75

Bowden, Jr., C. Mark
Barbara
Ofc. 1800 Nichalasville Rd.
Lexingtan, 40503
606-276-4347
Res. 933 Chinae Raad
Lexingtan, 40502
606-266-7683
SU 1612 75

Bowers, Frank R.
Marilyn
Ofc. UKMC-Health Service
Lexingtan, 40536
606-233-6476
Res. 3374 Pimlica Parkway
Lexingtan, 40502
606-272-1285
P 3440 62

Bowers, Jr., C. Richard
Barbara Jean
Ofc. 1725 Harradsburg Rd.
Suite I-2
Lexingtan, 40504
606-278-8443
Res. 1701 Ban Air Drive
Lexingtan, 40502
606-266-2630
OPH 1320 76

Braen, G. Richard
Susan
Ofc. UKMC, H-134
Lexingtan, 40536
606-288-5908
Res. 1249 Greendale Rd.
Lexingtan, 40511
606-252-1635
EM 3441 72

Bray, Gary T.
Pam
Ofc. 2537 Larkin Rd.
Lexingtan, 40503
606-277-5703
Res. 3144 Warrenwaad Wynd
Lexingtan, 40503
606-266-5703
ORS 1612 74

Brewer, Walter R.
Terrie
Ofc. 2368 Nichalasville Rd.
Lexingtan, 40503
606-278-2325
Res. 2050 Delang Raad
Lexingtan, 40503
606-272-6708
U 2107 63

Brooks, William H.
Caral
Ofc. 152 W. Zandale Dr.
Lexingtan, 40503
606-277-6143
Res. 735 Lakeshare Drive
Lexingtan, 40502
606-266-2054
NS 1612 69

Broudy, Bruce C.
Elizabeth
Ofc. 1221 Sauth Braadway
Lexingtan, 40504
606-255-6841
Res. 3260 Carnwall Drive
Lexingtan, 40503
606-277-0594
IM 2402 74

Brower, Thomas D.
Hania
Ofc. UKMC-ORTHOP
Lexingtan, 40536
606-233-5533
Res. 3310 Braakhill Circle
Lexingtan, 40502
606-278-4094
ORS 2402 47

Brown, Marion G.
Katherine
Ofc. 108 E. Maxwell
Lexingtan, 40508
606-252-4406
Res. 1073 Lakewaad Ave.
Lexingtan, 40502
606-266-6505
ORS 4105 39

Brown, David L.
Pat
Ofc. 3320 Tates Creek
Lexingtan, 40502
606-252-3495
Res. 125 Eastin Raad
Lexingtan, 40505
606-299-0315
ANES 3109 59

Bryant, Jr., Thomson R.
Betty
Ofc. 1800 Sa. Limestane 204
Lexingtan, 40503
606-277-7174
Res. 636 Raintree Raad
Lexingtan, 40502
606-269-2992
SU 2001 43

Bunch, Edwin L.
Brenda J.
Ofc. 660 N. Braadway
Lexingtan, 40508
606-255-8422
Res. 648 N. Braadway
Lexingtan, 40508
606-231-9980
P 1612 74

Burke, Winston L.
Jayne
Ofc. 865½ E. High St.
Lexingtan, 40502
606-266-2495
Res. 288 Melbaurne
Lexingtan, 40503
606-277-1093
FP 1602 56

Burke, John H.
Betty
Ofc. 393 Waller Ave.
Lexingtan, 40504
606-254-5711
Res. 3401 Nantucket Drive
Lexingtan, 40502
606-277-1713
FP 801 41

Burkhart, Robert C.
Jean
Ofc. 2370 Nichalasville Rd.
Lexingtan, 40503
606-278-8421
Res. Walnut Hill Raad
Lexingtan, 40503
606-272-7210
FP 1602 58

Burkhart, William K.
Peggy
Ofc. 2370 Nichalasville Rd.
Lexingtan, 40503
606-278-8421
Res. 829 Cahaba Rd.
Lexingtan, 40502
606-277-5361
FP 4106 61

Caffrey, P. Raphael
Bette
Ofc. 2370 Nichalasville Rd.
Lexingtan, 40503
606-278-9513
Res. Lexingtan, 40502
606-255-9784
PATH 2434 57

Caisley, Ian J.D.
Ofc. 1725 Harradsburg Rd.
Lexingtan, 40504
606-278-9566
Res. 750 Shaker Dr.
Apt. 1015
Lexingtan, 40504
606-276-3960
FP 8701 74

Caldroney, Ralph D.
Susan
Ofc. UKMC Internal Medicine
Lexingtan, 40536
606-233-5981
Res. 3616 Humphrey Lane
Lexingtan, 40502
606-269-8755
IM

Caldwell, Joseph
Evelyn
Ofc. 176 East Reynalds Rd.
Lexingtan, 40503
606-272-0621
Res. 3564 Glaucester Dr.
Lexingtan, 40510
606-252-0966
IM 3440 64

Chenault, Harvey
Billie
Ofc. 152 W. Zandale Dr.
Lexingtan, 40503
606-277-6143
Res. 667 Tateswaad Drive
Lexingtan, 40502
606-266-6411
NS 1602 39

Chin, Hong W.
Saa J.
Ofc. UK-Radiatian
Lexingtan, 40536
606-233-6486
Res. 1096 Chinae Raad
Lexingtan, 40502
606-269-4576
R 7604 62

Clark, Carl T.
Kathryn
Ofc. 1200 Calanial Dr.
Lexingtan, 40504
Res. 1200 Calanial Dr.
Lexingtan, 40504
606-255-1737
GP 1602 31

Clarke, William F.
Virginia
Ofc. Bax 5091
Lexingtan, 40555
606-252-3059
Res. 5376 Stewart Rd.
Raute 10
Lexingtan, 40511
606-299-6629
IM 1602 45

Clawson, D. Kay
Janet
Ofc. UKMC
Lexingtan, 40536
606-233-6582
Res. 810 DeLang Rd.
Lexingtan, 40515
606-272-3630
ORS 2001 52

FAYETTE

Coates, Frederick H.
Debarah Blaam
Ofc. 3320 Tates Creek Rd.
Lexingtan, 40502
606-168-1030
Res. Waods Raad Route 1
Nichalasville, 40356
606-223-7200
ANES 1612 79

Coats, Thomas F.
Ofc. 1800 S. Limestane #301
Lexingtan, 40503
606-276-2591
Res. 240 Market St.
Lexingtan, 40508
606-255-9067
PS 3101 60

Coghe, David W.
Ofc. 333 Waller Ave. #103
Lexington, 40504
606-254-3307
P 4701 67

Cole, John R.
Cynthia
Ofc. Lexingtan Clinic
Lexingtan, 40504
606-255-6841
Res. 5 Lansdawne Estates
Lexingtan, 40502
606-277-2179
U 601 54

Coleman, Timothy L.
Debby
Ofc. 1725 Harradsburg Rd. #13
Lexingtan, 40504
606-278-5452
Res. 761 W. Capper Dr.
Lexingtan, 40502
606-269-3142
N 4501 72

Collins, John W.
Peggy H.
Ofc. Dept. Ophthalmology
Lexington, 40536
606-233-5866
Res. 2035 Bridgepart Dr.
Lexingtan, 40502
606-269-3048
OPH 1612 71

Collins, William J.
Canstance
Ofc. 2134 Nichalasville Rd.
Lexington, 40503
606-278-9393
Res. 1600 Ashwaod
Lexingtan, 40502
606-266-4466
OPH 1602 61

Combs, Ballard F.
Mary Catherine
Ofc. 270 Cachran Rd.
Lexingtan, 40502
Res. 270 Cachran Raad
Lexingtan, 40502
606-266-5190
GP 3441 34

Combs, Arnold B.
Nancy
Ofc. 249 Shady Ln.
Lexingtan, 40503
Res. 249 Shady Lane
Lexingtan, 40503
606-277-1795
OTO 2101 32

Combs, Charles R.
Cynthia
Ofc. 1725 Harradsburg Rd.
Lexington, 40504
606-278-9546
Res. 708 Turf Caurt
Lexingtan, 40502
606-269-5891
ORS 1612 69

Combs, Paul S.
Ofc. 1 St. Jaseph Dr.
Lexington, 40504
606-278-3436
Res. 302 Chippendale Circle
Lexingtan, 40502
606-268-2892
R 1612 72

Cooper, Wilford L.
Mary Leda
Ofc. 11 Lansdawne Estates
Lexingtan, 40502
606-277-1616
Res. 11 Lansdowne Estates
Lexingtan, 40502
606-277-1616
CRS 4202 39

Cooper, Sidney P.
Ofc. 1105 Meridian Dr.
Lexingtan, 40504
Res. 1105 Meridian Dr.
Lexingtan, 40504
606-277-5347
SU 3441 30

Cooper, William L.
Barbara
Ofc. 1221 Sa. Braadway
Lexingtan, 40504
606-255-6841
Res. 445 Bristal Road
Lexingtan, 40502
606-269-7171
R 1612 70

Cooper, Robert M.
Caral
Ofc. 1221 Sa. Braadway
Lexingtan, 40504
606-255-6841
Res. 794 Glendaver Caurt
Lexington, 40502
606-269-4209
IM 1612 72

Cooper, James K.
Diane Gelarden
Ofc. MN105, UKMC
Lexingtan, 40536
606-233-6268
Res. Raute 5, Newman Raad
Lexingtan, 40511
606-272-8624
IM 4105 62

Coordes, Kathleen M.
Cardie
Ofc. 1725 Harradsburg Rd.
Lexingtan, 40504
606-278-0471
Res. 720 Longwaad Raad
Lexington, 40503
606-223-4563
OBG 2403 77

Copeland, G. Nelson
Marie
Ofc. 1800 Nichalasville Rd.
Lexingtan, 40503
606-278-0567
Res. 1236 Summit Drive
Lexingtan, 40502
606-269-2282
OBG 4106 60

Corales, Enedino R.
Betty
Ofc. 627 W. 4th St.
Lexingtan, 40508
606-255-1431
Res. 481 Lakeshare Drive
Lexingtan, 40502
606-266-1346
P 8507 55

Cornish, Allen L.
Evelyn
Ofc. 1236 Eldermere
Lexingtan, 40502
Res. 1236 Eldemere
Lexingtan, 40502
606-266-2596
IM 3101 40

Cornish, III, Allen L.
Katherine
Ofc. 1221 South Braadway
Lexingtan, 40504
606-255-6841
Res. 540 Clintan Rd.
Lexingtan, 40502
C 1612 74

Costich, Timothy D.
Julia
Ofc. 1725 Harradsburg Rd. St. L
Lexingtan, 40504
606-278-0396
Res. 1620 Fincastle Raad
Lexingtan, 40502
606-269-1779
PD 1612 73

Counts, Edward F.
Peggy
Ofc. 2134 Nichalasville Rd. #11
Lexingtan, 40503
606-278-9592
Res. 800 Pravidence Rd.
Lexington, 40502
606-269-4936
GP 4504 46

Cowen, David L.
Sandy
Ofc. Clinical Affairs,
UKMC, H-108A
Lexingtan, 40536
606-233-6086
Res. 617 Centennial Court
Lexingtan, 40502
606-269-4049
IM 502 59

Cowherd, Colby N.
Carrine
Ofc. 1740 S. Limestone
Lexingtan, 40503
606-278-2001
Res. 3364 Overbraak Dr.
Lexingtan, 40502
606-277-0390
R 1602 49

Cowles, Mary B.
Fred Haad
Ofc. 634 Sayre Ave.
Lexingtan, 40508
606-253-2598
Res. 924 Bravingtan Way
Lexingtan, 40503
606-223-1764
P 4805 68

Coyer, Bruce H.
Ofc. 1800 S. Limestane
Lexington, 40503
606-276-4316
C 1612 73

Crawford, Ben W.
Mary Ja
Ofc. 1112 First Security Plaza
Lexington, 40507
606-254-1336
Res. 3413 Nantucket Dr.
Lexingtan, 40502
606-277-7838
ANES 1602 53

Crawford, E. Philip
Ann
Ofc. 395 Redding Rd.
Lexingtan, 40502
606-254-1336
Res. 395 Redding Rd. #34
Lexingtan, 40502
606-272-8564
ANES 1602 55

Crocker, Max A.
Barbara
Ofc. 915 S. Limestane
Lexington, 40503
606-233-6371
Res. 606 Tatewaad Drive
Lexingtan, 40502
606-266-6958
FP 4106 63

Cronin, John D.
Phyllis
Ofc. Lexingtan Clinic
Lexingtan, 40504
606-255-6841
Res. 454 Waadlake Way
Lexingtan, 40502
606-269-4568
IM 4504 63

Cropper, Wendy G.
Samuel
Ofc. 1221 Sa. Broadway
Lexingtan, 40504
606-255-6841
Res. 432 Fayette Park
Lexingtan, 40508
606-253-3859
IM 1612 74

FAYETTE

Crossen, Philip S.
Lee
Ofc. 1517 S. Limestone
Lexington, 40503
606-277-5736
Res. 1975 Armstrong Mill Pike
Lexington, 40515
606-272-2237
OBG 2402 54

Crutcher, Richard R.
Dorothy
Ofc. 221 Chinoe Rd.
Lexington, 40502
Res. 221 Chinoe Rd.
Lexington, 40502
606-266-5070
SU 4105 37

Cullen, John W.
Borboro
Ofc. 780 Chinoe
Lexington, 40502
606-254-0309
Res. 780 Chinoe
Lexington, 40502
606-266-6996
ANES 3406 53

Cunningham, Melvin D.
Lindo
Ofc. 800 Rose St. MS 472
Lexington, 40536
606-233-5530
Res. 925 Chinoe Pork
Lexington, 40502
606-269-6663
PD 3441 65

Dahlenburg, David R.
Susie
Ofc. 1 St. Joseph Dr.
Lexington, 40504
606-278-3436
Res. 913 Turkey Foot Rd.
Lexington, 40502
606-266-5728
PATH 1602 71

Dalton, W. Lisle
Kathy
Ofc. 1221 South Broodwoy
Lexington, 40504
606-255-6841
Res. 1409 Essex Pork
Lexington, 40502
606-266-8452
OBG 1612 75

Damron, James R.
C.J.
Ofc. 310 So. Limestone
Lexington, 40508
606-254-2778
Res. 1611 Fincostle Rood
Lexington, 40502
606-266-0838
R 1320 71

Darnell, Matthew C.
Julio
Ofc. 225 Chenoult Rd.
Lexington, 40502
606-233-4511
Res. 225 Chenoult Rd.
Lexington, 40502
606-266-5100
IM 2005 43

Daugherty, Michael E.
Lindo
Ofc. 1725 Harrodsburg Rd.
Lexington, 40504
606-278-2334
Res. 2032 Von List Way
Lexington, 40502
606-266-1862
SU 1612 66

David, Alan K.
Miriom
Ofc. 915 S. Limestone
Lexington, 40503
606-233-6371
Res. 3418 Brookhoven Drive
Lexington, 40502
606-278-3333
FP 2403 71

Davis, Kent L.
Cheryl Peorson
Ofc. 108 Arcodio Pork
Lexington, 40503
606-278-9796
FP 2446 78

Dawson, M. Allen
Nancy
Ofc. 2370 Nicholosville Rd.
Lexington, 40503
606-277-5716
Res. Weisenberge Mill Rood
Midwoy, 40347
606-846-4651
IM 1612 64

Dean, Melvin L.
Elizobeth
Ofc. Rt. 3
Nicholosville, 40356
Res. Rt. 3
Nicholosville, 40356
606-885-9571
SU 1602 40

Demos, Jon S.
Debbie A.
Ofc. 2101 Nicholosville Rd., 110
Lexington, 40503
606-278-2356
Res. 1205 Baker Lone
Nicholosville, 40356
606-887-4806
U 1612 75

Dillon, Jr., Marcus L.
Ede
Ofc. VA Med Ctr., Copper Dr.
Lexington, 40511
606-233-4511
Res. 3336 Broemer Dr.
Lexington, 40502
606-278-0181
SU 3207 48

Dochterman, Darryl L.
Kathryn
Ofc. 1 St. Joseph Dr.
Lexington, 40504
606-278-3436
Res. 604 Tolly Rood
Lexington, 40502
606-266-1069
R 1403 66

Domstad, Peggy A.
Ofc. UKMC-Radiotion Medicine
Lexington, 40536
606-233-6585
Res. 3326 Montavesta Drive
Lexington, 40502
PATH 4204 64

Donaldson, Jr., Elvis S.
Morcio
Ofc. UKMC-OB-GYN
Lexington, 40536
606-233-5277
Res. 790 Hildeen
Lexington, 40502
606-277-6560
OBG 1612 71

Donnelly, John D.
Corol
Ofc. 2368 Nicholosville Rd.
Lexington, 40503
606-278-2325
Res. 365 Andover Drive
Lexington, 40502
606-268-1423
U 802 67

Donohue, Thomas A.
Connie
Ofc. Lexington Clinic
Lexington, 40504
606-255-6841
Res. 912 Turkey Foot Rood
Lexington, 40502
606-269-7781
SU 3106 74

Dorroh, Glenn U.
Ofc. 1512 Fontoine Rd.
Lexington, 40502
Res. 1512 Fontoine Rd.
Lexington, 40502
606-266-6684
IM 1602 31

Dowden, William L.
Lindo
Ofc. 1725 Horrodsburg Rd.
Lexington, 40504
606-278-2334
Res. 6551 Cloys Mill Rood
Lexington, 40514
606-223-4262
PS 1612 70

Dozier, George S.
Suzonne
Ofc. 3581 Horrodsburg Rd.
Lexington, 40503
606-233-4511
Res. 3581 Horrodsburg Rd.
Lexington, 40503
606-223-5515
IM 1602 50

Dubick, Marc N.
Ofc. Rt. 4, Troy Pike
Versoilles, 40383
606-252-3495
Res. Route 4
Versoilles, 40583
606-873-5241
ANES 1612 75

Dubilier, Louis D.
Vera
Ofc. 2370 Nicholosville Rd.
Lexington, 40503
606-278-9513
Res. 665 Boyswoter Woy
Lexington, 40503
606-277-0549
PATH 3145 60

Eastland, M. Wilson
Carole
Ofc. 1221 S. Broadwoy
Lexington, 40504
606-255-6841
Res. 224 S. Hanover Ave.
Lexington, 40502
606-269-3414
SU 903 65

Eckerline, Jr., Charles
Ofc. UKMC Anesthesiology
Lexington, 40536
ANES 1612 77

Edelstein, Stephen G.
Ofc. 1517 So. Limestone
Lexington, 40503
606-278-6061
Res. 1824 Fielden Dr.
Lexington, 40502
606-266-5465
C 2001 61

Edger, Donald E.
Ofc. 2366 Nicholasville Rd.
Lexington, 40503
606-277-7151
Res. Midway Road
Georgetown,
606-846-4295
OBG 3441 55

Eilers, Betty Lou
Lowrence
Ofc. UKMC Pediatrics
Lexington, 40536
606-233-5530
Res. 337 Green Rood
Wolton, 41094
606-356-2952
PD 1612 79

Ellingsen, Norman H.
Kothy
Ofc. 1221 S. Broodway
Lexington, 40504
606-255-6841
Res. 649 Teokwood Dr.
Lexington, 40502
606-269-5952
ORS 802 66

Elliott, Edward C.
Ofc. UKMC, Pathology
Lexington, 40536
SU 1612 80

Ellis, William C.
Doris
Ofc. 2620 Wilhite Dr.
Lexington, 40503
606-278-0363
Res. 809 Cohoba Rd.
Lexington, 40502
606-278-3780
OBG 3441 49

FAYETTE

Evans, Orville T.
Elizabeth
Ofc. 1004 Haney Creek Rd.
Lexingtan, 40502
Res. 1004 Honey Creek Rd.
Lexington, 40502
606-266-1334
CRS 1602 34

Evans, Carl T.
Mary
Ofc. 1221 S. Broadway
Lexingtan, 40504
606-255-6841
Res. 774 Abbatt Rd.
Lexingtan, 40502
606-277-9033
OBG 3702 54

Evans Cynthia M.
John
Ofc. 450 New Circle Rd. NE
Lexingtan, 40505
606-253-9791
Res. Rt. 1 Paradise Lane
Nicholosville, 40356
606-223-5391
FP 102 78

Farley, Claude H.
Elizabeth
Ofc. 2370 Nicholasville Rd.
Lexington, 40503
606-277-5716
Res. 217 Wilson-Downing Rood
Lexingtan, 40503
606-272-5443
IM 1612 64

Faulconer, Harold T.
Becky
Ofc. 1800 S. Limestone
Lexingtan, 40503
606-278-6031
Res. 8 Hampshire Pl.
Lexington, 40502
606-269-2920
CRS 1602 58

Fischer, Doane
Cothy
Ofc. 700 Kirkland Dr.
Lexington, 40502
606-233-6426
Res. 700 Kirklond Dr.
Lexington, 40502
606-278-8037
PD 3713 47

Flanigan, Robert C.
Kothy
Ofc. Urolagy, UKMC
Lexington, 40536
606-233-6677
Res. 648 Rointree
Lexington, 40502
606-269-8049
U 3406 72

Floyd, John B.
Margaret
Ofc. 119 East Maxwell St.
Lexington, 40508
606-252-5627
Res. 1890 Parkers Mill Rd.
Lexington, 40504
606-276-1819
SU 1602 41

Floyd, Richard D.
Mary
Ofc. 1221 S. Broadwoy
Lexington Clinic
Lexington, 40504
606-255-6841
Res. 841 Sherwood Dr.
Lexington, 40502
606-266-2895
TS 601 52

Fortune, Carl H.
Ofc. 1853 Fielden Dr.
Lexingtan, 40502
Res. 1853 Fielden Dr.
Lexington, 40502
606-266-1294
IM 2101 26

Foster, George L.
Ofc. 2101 Nicholasville Rd.
Lexingtan, 40503
606-278-7813
Res. 333 Culpepper Drive
Lexington, 40502
606-266-8610
IM 3441 61

Foster, Martha M.
Ofc. 135 Maxwell St.
Lexingtan, 40508
606-133-0072
Res. 223 Queensway Drive
Lexington, 40502
606-266-4608
P 1701 60

Fox, John M.
Carole
Ofc. 1800 S. Limestone
Lexington, 40503
606-278-6031
Res. Route 10
Athens-Boone Road
Lexingtan, 40511
606-233-9962
CRS 1602 68

Freedman, James R.
Mory Lau
Ofc. 2101 Nicholsville Rd.
Lexington, 40503
606-277-1350
Res. 713 Burkshire Dr.
Lexington, 40502
606-277-9287
OBG 1602 45

Freer, John H.
Anito
Ofc. 2620 Wilhite Dr.
Bldg. 2, 203
Lexingtan, 40503
606-278-8417
Res. 360 Atwaad Drive
Lexington, 40503
606-272-7479
P 1612 67

Frey, Walter D.
Evongeline
Ofc. 200 West Second St.
Lexington, 40507
606-254-1383
Res. 224 Chenoult Rood
Lexington, 40502
606-266-7438
OPH 4105 29

Friesen, Jerold N.
Mary Lou
Ofc. 135 E. Maxwell
Lexingtan, 40508
606-254-0124
Res. 529 Clinton Rd.
Lexington, 40502
606-269-5098
ORS 1612 72

Fulmer, Adrian A.
Annelle
Ofc. 2370 Nicholasville Rd.
Lexington, 40503
606-277-6145
Res. 636 Centennial Ln.
Lexington, 40502
606-269-7478
IM 2402 72

Furcolow, Michael L.
Carolyn
Ofc. P.O. Box 296
Reedville, VA, 22539
Res. P.O. Box 296
Reedville, VA, 22539
601 34

Garden, John W.
Ann
Ofc. 276 Horrison Ave.
Lexington, 40508
606-255-3331
Res. 262 Market Street
Lexington, 40508
606-255-1871
OPH 3201 61

Gardner, Neven John
Laura
Ofc. 1221 S. Broodwoy
Lexington, 40504
606-255-6841
Res. 1897 Blairmore
Lexington, 40502
A 3441 73

Gay, James G.
Anne
Ofc. 1221 S. Broadwoy
Lexington, 40504
606-255-6841
Res. Box 22303
Lexington, 40522
606-266-3438
IM 4501 65

Gee, William F.
Pam
Ofc. 1221 So. Broadwoy
Lexington, 40504
606-255-6841
Res. 3204 Habcaw Ln.
Lexingtan, 40502
606-266-2237
U 4805 67

George, Donald I.
Kothleen
Ofc. 1832 Versoilles Rd.
Lexington, 40504
606-252-0886
Res. 341 Strathmore Rood
Lexingtan, 40505
606-299-5382
P 3712 45

Geren, Jack W.
Marilyn
Ofc. 604 Merimoc Dr.
Lexingtan, 40503
606-233-5908
Res. 604 Merrimoc Dr.
Lexington, 40503
606-276-3205
EM 1475 75

Gerson, Kenneth L.
Alberta
Ofc. 2366 Nicholosville Rd.
Lexington, 40503
606-277-9112
Res. 836 Cahoba Rood
Lexington, 40502
606-278-4474
PD 3440 58

Gierlach, Zygmunt S.
Marilyn
Ofc. 1517 S. Limestone
Lexington, 40503
606-278-2321
Res. P.O. Box 1086
Nicholasville, 40356
606-885-9606
R 2107 46

Gill, C. Richard
Sue
Ofc. 1221 S. Broadway
Lexington Clinic
Lexington, 40504
606-255-6841
Res. 3422 Brondon Dr.
Lexington, 40502
606-266-7773
IM 801 55

Gilliam, M. Randolph
Sara
Ofc. 2101 Nicholosville Rd.
Lexingtan, 40503
606-277-5766
Res. 1244 Summit Drive
Lexington, 40502
606-266-6803
U 1602 44

Golden, Abner
Jonet
Ofc. MS 305, UKMC
Lexington, 40536
606-233-5266
Res. 605 Russell Avenue
Lexington, 40508
606-233-7289
PATH 2001 42

Goodenow, Thomas J.
Pat
Ofc. 1221 So. Braadway
Lexington, 40504
606-255-6841
Res. 3406 Montavesto Dr.
Lexington, 40502
606-266-0788
IM 3440 72

FAYETTE

Goodman, Robert P.
Judy
Ofc. 2370 Nicholosville Rd.
Lexingtan, 40503
606-277-6163
Res. 100 Chinoe Rd.
Lexington, 40502
606-266-7031
ORS 4105 63

Graff, Michael
Vicky
Ofc. 2370 Nicholosville Rd.
Lexington, 40504
606-278-9513
Res. 1327 Strawberry Lane
Lexingtan, 40502
PATH 4105 74

Gragg, Logan
Pork
Ofc. #7 Tonglewaad East
Lexington, 40505
Res. #7 Tonglewood, Eost
Lexington, 40505
606-299-4875
P 1602 41

Granacher, Robert P.
Lindo
Ofc. 1517 So. Limestone
Lexington, 40503
606-277-7187
Res. 3361 Carriage Lane
Lexingtan, 40502
606-272-7015
P 1612 72

Graulich, Kenneth B.
Sue
Ofc. 1221 So. Broadway
Lexington, 40504
606-255-6841
Res. 324 Leawood Dr.
Lexington, 40502
606-277-2993
N 1206 70

Greene, George G.
Ofc. 1307 So. Limestone
Lexingtan, 40503
OBG 1602 38

Greene, Jr., John W.
Eugenie
Ofc. UK Medicol Center
Lexington, 40536
606-233-5345
Res. 801 Greendole Pike
Lexington, 40511
OBG 3701 52

Griffen, Ward O.
Morgaret T.
Ofc. UKMC, Surgery
Lexington, 40536
606-233-6011
Res. 3405 Nontucket Dr.
Lexington, 40502
606-278-1615
SU 3120 53

Griffin, Robert J.
Charlotte C.
Ofc. 280 Swigert Ave.
Lexington, 40505
606-299-6160
Res. 280 Swigert Avenue
Lexingtan, 40505
606-299-6160
OBG 3701 31

Griffith, Gary L.
Marionne
Ofc. UKMC Dept. af Surgery
Lexington, 40536
606-233-6494
Res. 3525 Colneck
Lexington, 40502
606-268-2679
TS 2101 74

Griffith, J. Susan
Ofc. Fom. Proctice, UKMC
Lexingtan, 40536
Res. Fam. Practice, UKMC
Lexington, 40536
FP 1612

Grimes, Jr., Allen E.
Noncy
Ofc. 135 E. Maxwell St.
Lexingtan, 40508
606-255-0831
Res. 2019 Hort Rd.
Lexington, 40502
606-266-7530
SU 1206 62

Guiglia, Theodore N.
Potricio
Ofc. UK Heolth Services
Lexington, 40536
606-233-6366
Res. 3490 Castleton Way North
Lexingtan, 40502
606-272-1161
IM 1602 56

Guiler, J. Michael
Judy
Ofc. 1800 So. Limestane
Lexington, 40503
Res. 1975 Turkeyfoot Rd.
Lexington, 40502
OBG 1612 76

Gumbert, George M.
Skip
Ofc. 2537 Larkin Rd.
Lexington, 40503
606-277-5703
Res. 3337 Lonsdowne Dr.
Lexington, 40502
606-277-7118
ORS 1602 53

Gutgsell, Terence L.
Kothy Jo
Ofc. 1725 Harradsburg Rd.
Lexington, 40504
606-276-4486
Res. 1117 Sloshes Rd.
Lexington, 40502
606-269-8133
IM 1612 72

Hadley, Fred
Jane J.
Ofc. 360 Amsden Ave.
Versailles, 40383
606-873-8111
Res. 2954 Montovesto Dr.
Lexington, 40502
606-269-7197
U 1602 76

Hagan, John Campbell
Sara Hort
Ofc. VA Medicol Ctr.
Lexington, 40511
606-233-4511
Res. Rt. 4
Poris, 40361
606-362-4565
EM 1602 60

Hagen, Michael D.
Borbara C.
Ofc. 915 S. Lime
Lexington, 40503
606-273-9148
FP 2403 75

Hager, W. David
Lindo
Ofc. 2620 Wilhite Dr. 104
Lexingtan, 40503
606-278-0363
Res. 632 Centennial Ct.
Lexington, 40502
606-269-5708
OBG 1612 72

Hagihara, Patrick F.
Mory
Ofc. UKMC-Surgery
Lexington, 40536
606-233-4511
Res. 2133 Hort Court
Lexington, 40502
606-266-7827
SU 3103 60

Hall, Philip L.
Ofc. UKMC Anes.
Lexington, 40536
Res. UKMC Anes.
Lexington, 40536
ANES 1612 77

Hamburg, Joseph
Min
Ofc. UKMC-Medicine, Annex #2
Lexington, 40536
606-233-5986
Res. 720 Kirkland Dr.
Lexington, 40502
606-277-0181
FP 3709 51

Hamilton, Ronald D.
Glenna
Ofc. 1800 So. Limestone
Lexington, 40503
606-276-2558
Res. 2169 Islond Dr.
Lexington, 40502
606-255-3636
IM 1602 63

Hamilton, Thomas E.
Bonnie
Ofc. 1740 S. Limestane
Lexingtan, 40503
606-278-3411
Res. 740 Lokeshore Dr.
Lexington, 40502
606-269-7174
ANES 1612 67

Hammons, James W.
Alice
Ofc. 549 E. Third St.
Lexington, 40508
606-255-7380
Res. 822 Chinoe Rd.
Lexington, 40502
606-266-7585
GP 1276 58

Hammons, Stanley
Elizobeth
Ofc. VA Medicol Ctr.
Lexingtan, 40511
606-233-4511
P 1602 60

Hanley, Michael J.
Melinda
Ofc. 200 West Vine St.
Suite 6E
Lexington, 40507
606-254-0309
Res. 525 McColls Mill Rd.
Lexington, 40515
606-269-9147
ANES 1612 77

Hanson, Michael B.
Ofc. UKMC-OBG
Lexington, 40536
606-233-5277
Res. 213 Tohomo Road
Lexingtan, 40503
OBG 1612 74

Harding, Donnan B.
Margery
Ofc. 1248 Eldermere Rd.
Lexington, 40502
Res. 1248 Eldermere Road
Lexington, 40502
606-266-5453
R 1404 20

Harkness, Joseph C.
Mimi
Ofc. 1221 S. Broadway
Lexington, 40504
606-255-6841
Res. 810 Overbroak Circle
Lexington, 40502
606-278-1467
C 415 66

Harris, Walter D.
Betty
Ofc. 2505 Larkin Rd.
Lexingtan, 40503
606-278-6825
Res. 1525 Lokewood Dr.
Lexington, 40502
606-266-5143
OTO 4105 62

FAYETTE

Harris, Bill H.
Lindo
Ofc. 2366 Nicholosville Rd.
Lexington, 40503
606-278-3436
Res. 641 Tally Rd.
Lexington, 40502
606-269-1174
C 4501 74

Hart, Vernon F.
Peggy
Ofc. 1782 Bryan Station Rd.
Lexington, 40505
606-299-6223
Res. 417 McKenno Ct.
Lexington, 40505
606-299-6518
FP 1602 62

Havens, Dennis L.
Audria P.
Ofc. 1725 Horrodsburg Rd.
Lexington, 40504
606-278-2334
Res. 2059 Monor Dr.
Lexington, 40502
606-268-2004
TS 2101 68

Haynes, Jr., Harold C.
Faye
Ofc. 1412 No. Broadway
Lexington, 40505
606-255-2308
Res. 3801 Margo Court
Lexington, 40511
606-254-3049
FP 1602 55

Heizer, William L.
Dorotho B.
Ofc. 1396 Lokewood Dr.
Lexington, 40502
Res. 1396 Lokewood Dr.
Lexington, 40502
606-266-5977
GP 2101 33

Hellebusch, Arthur A.
Rito
Ofc. 2101 Nicholosville Rd.
Lexington, 40503
606-277-5766
Res. 305 Henry Cloy
Lexington, 40502
606-266-2079
U 1612 64

Hemmings, Jr., Ira L.
Fron
Ofc. 1725 Horrodsburg Rd. B
Lexington, 40504
606-276-1452
Res. 3445 Lonnette Ln.
Lexington, 40503
606-277-8808
A 4701 62

Hench, Richard F.
Barbora
Ofc. 2370 Nicholosville Rd.
Lexington, 40503
606-277-6145
Res. 2112 Islond Point
Lexington, 40502
606-266-4941
IM 3713 56

Henderson, III, A. H.
Peggy
Ofc. 1221 S. Broodwoy
Lexington, 40504
606-255-6841
Res. 1109 Pepperhill Circle
Lexington, 40502
606-266-6966
IM 1612 76

Herms, Ralph A.
Mary
Ofc. 1221 So. Broadwoy
Lexington, 40504
606-255-6841
Res. 2028 Impalo Lone
Lexington, 40502
606-268-1492
ORS 3440 59

Hicks, Lewis P.
Phyllis
Ofc. 1725 Horrodsburg Rd.
Lexington, 40504
606-276-1578
Res. 901 Curtiloge
Lexington, 40502
606-269-2500
OBG 1612 66

Hightower, Edward C.
Jonice
Ofc. Good Somariton Hosp.
Lexington, 40508
606-254-2778
Res. 1021 Turkey Foot Rd.
Lexington, 40502
606-266-3726
R 4106 62

Hill, John S.
Lindo
Ofc. 1725 Harrodsburg Rd.
Lexington, 40504
606-276-1452
Res. 3508 Arden Ploce
Lexington, 40502
606-272-0029
A 4701 74

Hiller, A. Joe
Beverly
Ofc. 1221 So. Broadwoy
Lexington, 40504
606-255-6841
Res. 2128 Lokeside Dr.
Lexington, 40502
606-266-8208
TS 1602 63

Ho, Mary T.
Ofc. UK, Dept. of Medicine
Lexington, 40536
606-233-5981
IM 2001 76

Hobbs, Thomas G.
Thelmo
Ofc. 2101 Nicholosville Rd.
Lexington, 40503
606-277-5771
Res. 3330 Versailles Pike
Lexington, 40504
606-254-1705
C 1206 39

Hobbs, John T.
Louise
Ofc. 2101 Nicholosville Rd.
Lexington, 40503
606-277-5771
Res. 806 Chinoe Road
Lexington, 40502
606-269-2413
IM 1602 68

Hoffman, Phillip H.
Nancy
Ofc. 1221 So. Broadwoy
Lexington, 40504
606-255-6841
Res. 3413 Pepperhill
Lexington, 40502
606-266-2380
IM 2434 75

Holloway, James B.
Koy
Ofc. 1725 Harrodsburg Rd.
Lexington, 40504
606-278-2334
Res. Rt. 10, Box 269
Lexington, 40511
606-253-2300
SU 601 45

Hopkins, Jr., Sidney F.
Ofc. 2368 Nicholasville Rd.
Lexington, 40503
606-277-5711
Res. 1806 Lakehill Circle
Lexington, 40502
606-269-6887
SU 1612 72

Hoven, Ardis D.
Ofc. 1221 So. Broodwoy
Lexington, 40504
Res. 320 Melbourne Way
Lexington, 40502
606-278-3040
IM 1612 70

Hull, David A.
Lynne
Ofc. 2368 Nicholosville Rd.
Lexington, 40503
606-277-5711·
Res. 2047 Monor Drive
Lexington, 40502
606-269-3050
SU 4106 47

Humbert, Jr., Vernon H.
Ofc. 135 Maxwell St. 210
Lexington, 40508
606-233-7525
Res. 2414 Richmond Road
Lexington, 40502
606-269-2910
C 601 72

Hunsaker, III, John C.
Ann
Ofc. 19th St. ond Moss. Ave.
Woshington, DC, 20003
202-724-4330
Res. 4809 Bending Lane
Woshington, DC, 20007
202-342-1332
PATH 1612 77

Hunter, Bush Alexander
Billie
Ofc. 437 No. Upper St.
Lexington, 40508
Res. 439 N. Upper
Lexington, 40508
GP 803 25

Hunter, James B.
Molly
Ofc. 1221 So. Broadway
Lexington, 40504
606-255-6841
Res. 214 Clenoult Rd.
Lexington, 40502
606-266-3517
IM 102 63

Hyde, Gordon L.
Connie
Ofc. U of K Med. Ctr. SU
Lexington, 40536
606-233-6085
Res. 3311 Brookhill Circle
Lexington, 40502
606-277-9379
SU 2101 57

Isaacs, Sidney
Solly B.
Ofc. 3320 Totes Creek Rd.
Lexington, 40502
606-252-3495
Res. 1242 Cotnip Hill Rd.
Nicholosville, 40356
606-223-4814
ANES 2005 60

Jackson, Raymond C.
Bobby
Ofc. 415 Rivo Ridge
Richmond, 40475
606-624-0355
Res. 415 Rivo Ridge
Richmond, 40475
606-624-0355
EM 3501 73

Jacobs, Jamie J.
Jean
Ofc. One St. Joseph Dr.
Lexington, 40504
606-278-3436
Res. 1347 Strowberry Ln.
Lexington, 40502
606-269-7096
C 4402 65

Jarboe, Thomas M.
Ofc. 1221 So. Broodwoy
Lexington, 40504
606-255-6841
Res. 2164 Lokeside Dr.
Lexington, 40502
IM 4105 64

Jenkins, Van R.
Mory Jeon
Ofc. 2620 Wilhite Dr.
Lexington, 40503
606-278-0363
Res. 2032 Bridgeport Dr.
Lexington, 40502
606-266-4960
OBG 1602 62

FAYETTE

Jenkins, Frank M.
Martho
Ofc. 2368 Nicholosville Rd.
#305
Lexington, 40503
606-278-9434
Res. 777 Glendover Rd.
Lexington, 40502
606-266-0063
OTO 301 59

Johnson, Jr., James E.
Neil
Ofc. IBM, 740 New Circle Rd.
Lexingtan, 40511
606-232-2436
Res. Fourth Street, Box 367
Millersburg, 40348
606-484-2019
OM 4106 59

Johnston, Coleman C.
Inez
Ofc. 3270 Bryan Station Rd.
Lexington, 40516
Res. Montrose Form
Lexington, 40516
606-299-5795
SU 4501 33

Johnston, David H.
Peggy
Ofc. 1221 So. Broadway
Lexington, 40504
606-255-6841
Res. 1048 The Lane
Lexington, 40504
606-278-4905
GE 3207 51

Jones, James B.
Alma
Ofc. 511 Southland
Lexington, 40503
606-277-5731
Res. 154 Mt. Tabor
Lexington, 40502
606-266-7893
OBG 4106 49

Jones, Erwin A.
Glorio
Ofc. 1221 So. Broadway
Lexington, 40504
606-255-6841
Res. 822 Glendover Rd.
Lexington, 40502
606-266-0016
PD 4105 59

Jones, Peter H.
Vera
Ofc. 1221 So. Broodwoy
Lexington, 40504
606-255-6841
Res. 132 South Ashland No. 3
Lexington, 40502
606-269-3427
NS 6606 43

Jones, Janet H.
John
Ofc. Annex 4, UKMC
Lexington, 40536
606-233-6475
Res. 1066 Mackey Road
Nicholasville, 40536
606-272-7063
P 1612 71

Julian, Bruce A.
Rachel
Ofc. 169 Burt Rd.
Lexington, 40503
606-276-5355
Res. 732 Old Dobbins Circle
Lexington, 40502
606-266-9418
IM 2402 75

Kaplan, Martin P.
Nickie
Ofc. 1725 Harrodsburg Rd.
Lexingtan, 40504
606-276-1452
Res. 733 Molobu Dr.
Lexington, 40502
606-277-3992
A 3108 53

Karim, Farhad
Ofc. 2368 Nicholosville Rd.
Lexington, 40503
PD 5088 72

Kasten, Gregory W.
Ofc. UKMC, Dept. of Anesthesiology
Lexington, 40536
ANES 1245 80

Kaufmann, Maurice
Saro
Ofc. 1725 Horrodsburg Rd.
Lexington, 40504
606-276-1452
Res. 223 Shody Ln.
Lexington, 40503
606-277-4049
A 1602 35

Kavanaugh, C. Nicholas
Bobbie
Ofc. 137 Pin Oak Dr.
Lexington, 40503
606-277-3555
Res. 219 Irvine Rd.
Lexington, 40502
606-266-8026
IM 2001 49

Keightley, Jr., James M.
Jessico F.
Ofc. Route #4
Versailles, 40383
606-278-3436
Res. Keene-Troy Rood, Rt. #4
Versoilles, 40383
606-885-4661
EM 4105 72

Kelly, Dennis B.
Pam
Ofc. 2366 Nicholosville Rd.
Lexington, 40503
606-278-3436
Res. 1228 Indian Mound Rd.
Lexington, 40502
606-266-5674
C 69

Kelty, Karl C.
Merle
Ofc. 304 Albany Rd.
Lexington, 40503
606-278-5489
Res. 304 Albony Road
Lexington, 40503
606-277-2482
IM 4106 43

Kenady, Sr., Daniel E.
Mory
Ofc. UKMC Surgery
Lexingtan, 40536
606-233-6602
Res. 2192 Lokeside Dr.
Lexington, 40502
606-269-2254
SU 802 72

Kibler, W. Ben
Betty
Ofc. 1221 So. Broodwoy
Lexington, 40504
606-255-6841
Res. 613 Edgewoter
Lexington, 40502
606-266-0120
ORS 4105 72

Kielar, Richard A.
Carolyn
Ofc. 1221 S. Broodwoy
Lexington, 40504
606-255-6841
Res. 491 Seeley Drive
Lexington, 40502
606-266-1257
OPH 3441 62

Kiesel, John L.
Lindo
Ofc. 212 N. Upper Box 1020
Lexington, 40588
606-253-3481
Res. 3860 Glodmon Woy
Lexington, 40503
606-223-4118
PD 1612 67

King, Jr., James C.
Martha F.
Ofc. 3313 Overbrook Dr.
Lexington, 40502
606-277-7169
Res. 3313 Overbrook Dr.
Lexington, 40502
606-277-7169
R 4105 61

Kinnaird, Robert
Elsie J.
Ofc. 2368 Nicholosville Rd.
Lexington, 40503
606-278-2325
Res. 176 Cherokee Pork
Lexington, 40503
606-278-2890
U 4501 44

Knepper, Orcena F.
Ofc. 1832 Versoilles Rd.
Lexington, 40504
606-252-0886
Res. 941 Moson Headley Raod
Lexington, 40504
606-255-6217
P 1502 30

Knoop, J. Douglas
Corolyn
Ofc. 1221 South Broadwoy
Lexingtan, 40504
606-255-6841
Res. 1037 Turkey Foot Road
Lexington, 40502
606-269-8922
OTO 1612 74

Koffler, Bruce H.
Margee
Ofc. 120 N. Eagle Creek Dr.
Lexingtan, 40509
606-233-5866
Res. 396 Atwood Dr.
Lexington, 40503
606-272-5700
OPH 0802 71

Kolkin, Jon
Ofc. 2101 Nicholasville Rd.
Suite 304
Lexington, 40503
ORS 1005 77

Kotchen, J. Morley
Theodore A.
Ofc. UKMC, MN 562
Lexingtan, 40536
Res. 1724 Foirway Drive
Lexingtan, 40502
606-266-3962
PH 3406 64

Kotchen, Theodore A.
Ofc. 1724 Fairwoy Dr.
Lexingtan, 40502
606-233-5822
Res. 1724 Fairwoy Dr.
Lexington, 40502
606-266-3962
IM 3406 64

Kraus, Robert F.
Dee
Ofc. UKMC Dept. Psy.
Lexington, 40536
Res. RR #1, Box 34
Wilmore, 40390
606-858-8193
P 4806 55

Kung, Markus K.
Shoron
Ofc. UKMC Pulmonory
Lexington, 40536
606-233-5555
Res. 3857 Heimbaugh Lone
Lexington, 40503
606-223-4527
PUD 9002 70

Kuo, Sanford H.
Tien Wei
Ofc. P.O. Box 11750
Lexington, 40577
606-255-3676
Res. 2049 Porasol Drive
Lexington, 40513
606-223-4996
PATH 5088 62

Kyker, Paul G.
Sherry
Ofc. 2620 Wilhite Dr.
Lexington, 40503
606-277-6102
Res. 3388 Keithshire Way
Lexington, 40503
606-277-0611
PD 4106 60

FAYETTE

Lam, Robert C.
Rita
Ofc. F.C.I.
Lexington, 40511
606-255-6812
Res. 3413 Mantavesta Dr.
Lexington, 40502
606-266-5897
SU 5088 45

Lamkin, Jr., Nelson
Mary Ja
Ofc. 1221 Sa. Braadway
Lexington, 40504
606-255-6841
Res. 806 Glendaver Raad
Lexington, 40502
606-269-2157
A 1602 68

Leavell, Ullin W.
Anne
Ofc. 807 Sa. Limestane
Lexington, 40508
606-255-1025
Res. 1305 E. Capper Dr.
Lexington, 40502
606-266-7564
D 3207 45

Leichter, Steven B.
Sara
Ofc. 2108 Nichalasville Rd. KDC
Lexington, 40503
606-233-5474
Res. 3482 Castletan Way, N.
Lexington, 40502
606-272-3056
IM 4501 70

Lemon, Frank R.
Ofc. UKMC, MS129X
Lexington, 40536
606-233-5161
Res. 3200 Carnwall Dr.
Lexington, 40503
606-278-7111
IM 412 50

Lennarson, Vincent A.
Harriet
Ofc. 507 Chinae Rd.
Lexington, 40502
Res. 507 Chinae Raad
Lexington, 40502
606-266-1840
OTO 1403 36

Levy, William I.
Ofc. 3320 Tates Creek
Lexington, 40502
606-268-1030
Res. Raute 4
Shannan Run Raad
Versailles, 40383
606-873-6360
ANES 902 67

Lewis, Barnett W.
Victaria
Ofc. 2620 Wilhite Dr.
Lexington, 40503
606-277-6102
Res. 785 Lansdawne Circle
Lexington, 40502
606-277-6688
PD 3207 70

Lieber, Arthur
Marilyn
Ofc. U af K Med. Schaal
Lexington, 40536
606-233-5222
Res. 328 Henry Clay Blvd.
Lexington, 40502
606-266-1240
R 1602 53

Liebman, Jacob
Elisabeth
Ofc. 135 East Maxwell St.
Lexington, 40508
606-255-3676
Res. Hillgate Farm
Evans Mill Raad
Lexington, 40502
606-269-1192
PATH 9001 67

Long, Graydon A.
Ginny
Ofc. 168 Burt Rd.
Lexington, 40503
606-277-7129
Res. 812 Hildeen Dr.
Lexington, 40502
606-277-3100
TS 2101 48

Loventhal, John P.
Cannie
Ofc. One St. Jaseph Dr.
Lexington, 40504
606-278-3436
Res. 605 Centennial Lane
Lexington, 40502
C 1206 73

Lucas, Bruce A.
Jeannette
Ofc. 800 Rase St.
UKMC-Uralagy
Lexington, 40536
606-233-6677
Res. 648 Lakeshare
Lexington, 40502
606-269-2192
U 3207 65

Ludwig, Arnold M.
Aline
Ofc. UKMC-Dept. af Psychiatry
Lexington, 40536
606-233-5159
Res. Rt. 3, Bax 278
Nichalasville, 40356
606-885-4364
P 3701 58

Luftman, Martin J.
Virginia
Ofc. 1725 Harradsburg Rd.
Suite 201
Lexington, 40504
606-278-9439
Res. 3370 Mantilla Drive
Lexington, 40513
606-223-5033
PS 3441 76

Lykins, Samuel W.
Saundra
Ofc. 2368 Nichalasville Rd.
Lexington, 40503
606-277-9621
Res. 662 Tateswaad Dr.
Lexington, 40502
606-266-8151
SU 1602 50

Lynd, Priscilla A.
Ofc. 818 Chevy Chase Place
Lexington, 40502
606-269-4604
Res. 697 Berry Lane
Lexington, 40502
606-269-2475
PD 1612 68

MacFarlane, Noble T.
Claire
Ofc. 1221 Sa. Braadway
Lexington, 40504
606-233-1586
Res. 201 S. Hanaver Ave.
Lexington, 40502
606-266-4166
PD 4501 53

Mack, II, James C.
Barbara Sailer
Ofc. 422 Cadell Dr.
Lexington, 40509
606-268-1606
Res. 3413 Flintridge Circle
Lexington, 40502
606-272-4705
PD 1612 77

Maguire, Lawrence C.
Grace
Ofc. 1221 S. Braadway
Lexington, 40504
606-255-6841
Res. 644 Teakwoad Drive
Lexington, 40502
H 4402 73

Malek, John C.
Larraine
Ofc. 1221 S. Braadway
Lexington, 40504
606-255-6841
Res. 1728 Williamsburg Rd.
Lexington, 40504
606-277-6775
N 1403 55

Malluche, Hartmut H.
Ofc. UKMC, Dept. af Med.
Lexington, 40536
606-233-6517
Res. UKMC, Dept. af Med.
Lexington, 40536
606-268-2875
NEP 6803 71

Mandelstam, Paul
Caral
Ofc. UKMC Medicine
Lexington, 40536
606-233-5456
Res. 2917 Ark Rayal Way
Lexington, 40503
606-277-4342
IM 2001 50

Manongdo, Ernesto M.
Margie O.
Ofc. Eastern State Hasp.
Lexington, 40508
606-255-1431
Res. 3418 Snaffle Raad
Lexington, 40513
606-223-5253
P 8507 71

Martin, Charles E.
Glaria
Ofc. 1725 Harradsburg Rd.
Lexington, 40504
606-278-2334
Res. 7416 Grimes Mill Rd.
Lexington, 40515
606-269-3875
SU 4105 68

Maruyama, Yosh
Fudeka
Ofc. UKMC
Lexington, 40536
606-233-6486
Res. 1739 Lakewaad Drive
Lexington, 40502
606-266-7707
R 402 55

Mason, Aaron S.
Jessie
Ofc. 500 Lake Tower Dr. 48
Lexington, 40502
Res. 500 Lake Tawer Dr. 48
Lexington, 40502
606-266-7985
P 1211 36

Massie, Francis Milton
Ofc. Taylar Manar Berry Ave.
Versailles, 40383
Res. Taylar Manar Berry Avenue
Versailles, 40383
SU

Mattingly, Joan E.
Jaseph
Ofc. 1782 Bryan Statian Rd.
Lexington, 40505
606-299-6223
Res. 917 Tates Creek Rd.
Lexington, 40502
GP 1602 62

Mattingly, Sally S.
William
Ofc. V.A. Hasp.
Lexington, 40511
606-233-4511
Res. 3386 Overbraak Dr.
Lexington, 40502
606-278-8353
SU 4105 72

Mattingly, William T.
Sally
Ofc. 2101 Nichalasville Rd.
#310
Lexington, 40503
606-277-7129
Res. 3386 Overbraak Dr.
Lexington, 40502
606-278-8353
TS 1612 73

FAYETTE

Maxson, William T.
Betty
Ofc. 2370 Nicholosville Rd.
Lexingtan, 40503
606-277-5716
Res. Route 5, Ashgrove Pike
Nichalasville, 40356
606-272-3382
IM 1612 64

Maxwell, Jr., Edward N.
Ofc. 3050 Rio Dosa Dr.
Lexington, 40509
606-269-2325
Res. 421 Dudley Rd.
Lexingtan, 40502
606-266-8073
P 1612 71

Mayer, Lloyd D.
Ofc. 2368 Nicholasville Rd.
Lexington, 40503
606-277-1137
Res. 748 Old Dabbin Rd.
Lexington, 40502
606-266-7356
A 1602 44

Mayo, W. Porter
Pot
Ofc. 3325 Broemer Dr.
Lexington, 40502
606-277-7129
Res. 3325 Braemer Dr.
Lexingtan, 40502
606-277-3424
TS 1602 46

McAllister, Jr., Russell
Ann P.
Ofc. VA Medicol Ctr.
Lexington, 40511
606-233-4511
Res. 1612 Bon Air Drive
Lexington, 40502
606-269-3021
C 4504 67

McCready, Robert A.
Kris
Ofc. Surgery, UKMC
Lexington, 40536
606-233-6085
Res. 1434 Lokewood Dr.
Lexington, 40502
606-273-1194
SU

McDaniel, William E.
Joon
Ofc. 342 Waller Ave.
Lexington, 40504
606-277-8011
Res. 1747 Lokewood Dr.
Lexington, 40502
606-266-3205
D 1320 44

McGee, Edgar M.
Mory Lee
Ofc. 2368 Nicholasville Rd.
Lexingtan, 40503
606-277-4511
Res. 751 Brookhill Dr.
Lexington, 40502
606-276-2200
SU 3201 66

McHargue, Frederick B.
Janet M.
Ofc. Citizens Bonk Bldg.
Suite 6E
Lexington, 40507
606-254-0309
Res. 1232 Standish Way
Lexingtan, 40504
606-252-0072
ANES 1602 51

McManis, James C.
Lindo
Ofc. 2370 Nicholosville Rd.
Lexingtan, 40503
606-278-1691
Res. 2072 Bridgeport Dr.
Lexington, 40502
606-266-5693
PATH 1403 63

McMorrow, R. Gregory
Linda
Ofc. 169 Burt Rd. C+D
Lexington, 40503
606-276-5355
Res. 3378 Montilla Drive
Lexington, 40513
IM 4701 72

McRoberts, J. William
Joy
Ofc. UKMC
Lexington, 40536
Res. Lexington, 40502
606-266-4048
U 3120 59

Medina, William D.
Ofc. 1221 S. Broodway
Lexington, 40504
606-255-6841
Res. 1871 Linton Rd.
Lexington, 40505
IM 1612 76

Meeker, Jr., William R.
Win
Ofc. 2366 Nicholasville Rd.
Lexington, 40503
606-278-0589
Res. 417 Fayette Pork
Lexingtan, 40508
606-254-8700
SU 102 57

Mendiondo, Oscar A.
Morto
Ofc. Radiotion Med. UKMC
Lexingtan, 40536
606-233-6486
Res. 1359 Strowberry Ln.
Lexington, 40502
606-269-8934
R 5101 69

Mersack, Ira P.
Anito
Ofc. 807 So. Limestane
Lexington, 40508
606-255-1025
Res. 2136 Islond Dr.
Lexington, 40502
606-266-0953
D 1612 66

Meyer, David Andrew
Sara
Ofc. 135 E. Maxwell
Lexington, 40508
606-255-3890
Res. 433 Dudley Rd.
Lexingtan, 40502
606-269-8375
P 2402 75

Milan, Michael F.
Corolyn
Ofc. 2368 Nicholosville Rd.
Lexington, 40503
606-278-0386
Res. 1757 Bahama Rood
Lexington, 40509
606-293-6205
PS 1320 76

Miller, Thomas R.
Ja
Ofc. 2134 Nichalosville Rd.
Lexingtan, 40503
606-277-9755
Res. 1250 Lakewood Dr.
Lexington, 40502
606-266-3363
ORS 4106 43

Millett, Adrienne J.
Douglas Owen
Ofc. 238 Geri Ln.
Richmond, 40475
606-623-2210
Res. 1204 Medellin Ct.
Lexington, 40502
606-266-8607
OPH 1612 75

Moberly, Fred P.
Ofc. 370 Sa. Broadwoy
Lexington, 40508
606-254-1575
Res. 370 Sauth Broodwoy
Lexington, 40508
606-255-1127
D 3709 23

Mooney, Charles S.
Mortha
Ofc. 2101 Nicholosville Rd.
Lexington, 40503
606-277-5721
Res. 2700 Bryan Station Rd.
Lexingtan, 40516
606-293-2775
SU 3702 64

Moore, Andrew M.
Paggy
Ofc. 108 E. Maxwell St.
Lexington, 40508
606-252-4406
Res. 150 Mount Tobor Rd.
Lexington, 40502
606-266-2646
PS 2402 43

Moore, Glenn I.
Sarah
Ofc. 2620 Wilhite Dr.
Lexington, 40503
606-278-0363
Res. 2048 Lakeside Drive
Lexington, 40502
606-266-4729
OBG 1612 69

Moore, Charles R.
Diona
Ofc. 1221 So. Broadway
Lexington, 40504
606-255-6841
Res. 1105 The Lane
Lexingtan, 40504
IM 2101 68

Moosnick, Franklin B.
Marilyn
Ofc. 184 N. Mill St.
Lexingtan, 40507
606-254-7457
Res. 755 Brook Hill Dr.
Lexington, 40502
606-277-3040
IM 3441 40

Morgan, H. Brooks
Ruth
Ofc. 2537 Larkin Rd.
Lexington, 40503
606-277-5703
Res. 629 Edgewater Drive
Lexington, 40502
ORS 4105 66

Mortara, Richard H.
Carol
Ofc. 152 W. Zandole
Lexingtan, 40503
606-277-6143
Res. 355 Bronnon Road
Nicholasville, 40356
606-223-1629
NS 1243 67

Mostowycz, Leonidas
Oksona
Ofc. VA Medical Center B-120
Lexingtan, 40511
606-233-4511
Res. 1567 Lokewaod Court
Lexingtan, 40502
606-269-2710
R 5202 51

Muldrow, Jr., Louis M.
Susan
Ofc. 2366 Nichalosville Rd.
Lexington, 40503
606-278-0301
Res. 4701 Stacey Lone
Lexington, 40516
606-255-3636
PS 4105 60

Murphy, Owen B.
Ofc. 1403 Fontoine Rd.
Lexington, 40502
Res. 1403 Fontoine Road
Lexington, 40502
ORS 4105 38

Myers, Mellayne R.
Sharon
Ofc. 661 Cindy Bloir Woy
Lexington, 40503
606-276-4424
Res. 661 Cindy Blair Woy
Lexington, 40503
606-278-2671
EM 1602 74

FAYETTE

Myers, Jr., John E.
Dorlo M.
Ofc. 2365 Horrodsburg Rd.
St. A210
Lexington, 40504
606-223-3056
Res. 812 Turkeyfoot Ct. #2
Lexington, 40503
606-266-7721
IM 1602 54

Nicholls, Paul J.
Cindy
Ofc. UKMC-Orthopedic Surgery
Lexington, 40536
606-233-5533
Res. Route 2, Box 511A
Nicholosville, 40356
606-885-6958
ORS 1001 71

Nicholson, Charles H.
Jocqueline
Ofc. 1221 So. Broodway
Lexington, 40504
606-255-6841
Res. 334 Jesselin
Lexington, 40503
606-277-0659
TS 4105 55

Nighbert, Edwin J.
Sharon
Ofc. 1725 Harrodsburg Rd.
Lexington, 40504
606-278-2334
Res. 779 Harbor Point
Lexington, 40502
606-266-8645
SU 1612 66

Noonan, Jacqueline A.
Ofc. UKMC, MN466
Lexington, 40536
606-233-5481
Res. 1379 Strowberry Lone
Lexington, 40502
606-266-2927
PD 4402 54

Nunnelley, Jr., Preston
Lucille
Ofc. 2620 Wilhite Dr.
Lexington, 40503
606-278-6096
Res. 624 Tolly Road
Lexington, 40502
606-266-0822
OBG 1612 70

Offutt, IV, William N.
Jone
Ofc. 135 E. Moxwell, St. 200
Lexington, 40508
606-233-3800
Res. 336 E. Main St.
Geargetown, 40324
606-252-6877
OPH 1612 68

Olmstead, Willard B.
Morilyn
Ofc. 3320 Tates Creek
Lexington, 40502
606-252-3495
Res. 901 Wishbone Circle
Lexington, 40502
606-269-5892
ANES 3103 63

Orr, Jr., James A.
Ann
Ofc. 1221 Sa. Broadway
Lexingtan, 40504
606-255-6841
Res. 1244 Indian Mound Raod
Lexington, 40502
606-266-1880
C 1602 55

Pappas, John E.
Carolyn
Ofc. 1725 Horrodsburg Rd.
Lexington, 40504
606-276-4486
Res. 3000 Bowmans Mill Rood
Lexington, 40503
606-223-1134
IM 3713 70

Park, George R.
Peggy
Ofc. 1221 Sa. Braodway
Lexingtan, 40504
606-255-6841
Res. 708 Beechmont Road
Lexington, 40502
606-266-4966
C 4105 60

Parks, John H.
Elviro
Ofc. 436 W. Second St.
Lexington, 40508
606-254-9001
Res. 1226 Lakewood Drive
Lexingtan, 40502
606-269-6588
P 2001 50

Parr, Eugene Q.
Joon
Ofc. 2368 Nicholosville Rd.
Lexington, 40503
606-278-7471
Res. Keene Pike
Foxtole Form
Nicholosville, 40356
606-887-1018
ORS 1602 52

Parsley, Barry N.
Ofc. 1 St. Joseph Dr.
Lexington, 40504
606-278-3436
Res. 669 Mount Vernon Drive
Lexington, 40502
606-266-9551
EM 4504 76

Patel, Satish R.
Ela
Ofc. 2011 Rombler Rd.
Lexington, 40503
606-278-0323
Res. 3820 Hoysgood Lone
Lexington, 40503
606-223-2538
IM 5088 71

Patel, Kirit T.
Ofc. 3351 Cove Loke Dr. #54
Lexingtan, 40502
606-278-8126
Res. 351 Cove Lake Dr. #54
Lexington, 40502
606-269-3990
PATH 5088 68

Pauly, Thomas H.
Ofc. 1800 Nicholasville Rd.
Lexington, 40503
606-276-4391
Res. 116 Arcodio Pork
Lexington, 40503
PD 1612 74

Peat, Kenneth W.
Ofc. Lex. Humono Hosp.
Box 23260
Lexington, 40523
606-268-4800
Res. 3051 Kirklevington Dr. #31
Lexington, 40502
606-273-1885
R 1612 78

Penn, Dennis B.
Brendo
Ofc. 2130 Nichalosville Rd.
Lexington, 40503
606-277-1166
Res. 2013 Mt. Tobor Rood
Lexingtan, 40502
606-277-1166
PD 1602 55

Pennington, Robert E.
Carol
Ofc. VA Hospital - Leestown
Lexingtan, 40511
606-233-4511
Res. 1634 Meodowthorpe Ave.
Lexington, 40505
606-233-3733
SU 3701 36

Perrine, John C.
Lenoro
Ofc. 2370 Nicholasville Rd.
Lexingtan, 40503
606-277-6145
Res. 5209 Tates Creek Road
Lexington, 40515
606-272-4786
IM 4105 60

Phillips, Barbara A.
M. Smith, M.D.
Ofc. UKMC, Rm. MN 576
Lexington, 40536
606-233-5948
Res. UKMC, Rm. MN 576
Lexington, 40536
606-269-8340
IM 1612 77

Pinkstaff, Thomas H.
Dee
Ofc. 1221 S. Broodwoy
Lexington, 40504
606-255-6841
Res. 1086 The Lone
Lexington, 40504
606-276-1646
PD 1211 63

Pisacano, Nicholas J.
Virginio Leigh
Ofc. 2228 Young Dr.
Lexington, 40505
606-269-5626
Res. 3532 Colt Neck Lone
Lexington, 40502
FP 3709 51

Playforth, R. Herman
Elizabeth
Ofc. 1725 Harrodsburg Rd.
Lexington, 40504
606-278-2334
Res. 104 Jones Nursery Rood
Lexington, 40509
606-231-7303
TS 1907 63

Plumlee, John E.
Coralyn
Ofc. UKMC
Lexington, 40536
606-233-5956
Res. 5159 Tates Creek Pike
Lexington, 40513
606-272-9576
ANES 2403 59

Pope, James G.
Mary Lou
Ofc. 2368 Nicholosville Rd.
Lexington, 40503
606-277-7109
Res. 2013 Bixby Way E
Lexington, 40502
OPH 1602 55

Pope, Daniel B.
Ofc. UKMC, OPTH
Lexington, 40536
OPTH 1612 79

Poundstone, John W.
Ofc. 650 Newtown Pike
Lexington, 40508
606-252-2371
Res. 1660 Troveller Road
Lexington, 40504
606-276-4576
PH 1612 66

Preston, William O.
Alice M.
Ofc. 1220 So. Broodwoy
Lexington, 40504
606-252-5150
Res. 216 Clinton Rood
Lexington, 40502
606-266-6632
OPH 4105 36

Preston, Charles L.
Sally
Ofc. 2011 Rombler Rd.
Lexington, 40503
606-278-2781
Res. 701 Burkshire Drive
Lexington, 40502
606-277-3843
OBG 3441 50

FAYETTE

Prewitt, John H.
Libby
Ofc. 1941 Hart Rd.
Lexington, 40502
606-252-6164
Res. 1941 Hart Rd.
Lexington, 40502
606-266-4001
IM 3701 36

Price, David P.
Janet
Ofc. 171 Moore Dr.
Lexington, 40503
606-276-4424
Res. 3205 Honeyhill Lane
Lexington, 40502
606-266-0622
EM 1602 65

Primm, Jr., Daniel D.
Michelle K.
Ofc. 145 Eastover Dr.
Lexington, 40502
606-233-5533
Res. 145 Eastover Drive
Lexington, 40502
606-266-3750
ORS

Privett, Jr., George W.
Holly
Ofc. 152 W. Zandale Dr.
Lexington, 40503
606-278-0352
Res. 4193 Briarhill Pike
Lexington, 40516
606-293-1531
N 4204 67

Pulito, Andrew R.
Evelyn
Ofc. 2366 Nicholasville Rd.
Lexington, 40503
606-277-5778
Res. 809 Westchester Drive
Lexington, 40502
606-278-8691
SU 3101 69

Purcell, Carolyn F.
Ofc. 135 E. Maxwell #300
Lexington, 40508
606-252-7704
Res. 2989 Montavesta
Lexington, 40502
606-269-3766
OBG 1612 73

Purdom, Barry N.
Judy
Ofc. 721 Kirkland Dr.
Lexington, 40502
606-277-7281
Res. 721 Kirkland Dr.
Lexington, 40502
606-278-6863
IM 1612 68

Quillin, Ralph C.
Mary F.
Ofc. 1221 So. Broadway
Lexington, 40504
606-255-6841
Res. 1879 Parkers Mill Rd.
Lexington, 40504
606-252-7669
R 4105 44

Ram, Madhira D.
Noreen
Ofc. UKMC, MS 235
800 Rose
Lexington, 40536
606-233-6602
Res. 943 Edgewater Dr.
Lexington, 40502
606-269-5529
SU 7002 57

Ramsey, Barry W.
Ofc. 1701 Alexandria Dr.
Lexington, 40504
606-277-3490
Res. 285 Lafayette Parkway
Lexington, 40503
606-278-5647
PD 1612 74

Randall, Frank W.
Helen
Ofc. 3112 Clair Rd.
Lexington, 40502
606-255-6812
Res. 3112 Clair Rd.
Lexington, 40502
606-269-1552
FP 1612 70

Rankin, C. Edward
Betty
Ofc. 2101 Nicholasville Rd.
Lexington, 40503
606-277-6571
Res. 513 Clinton Road
Lexington, 40502
606-266-6566
IM 3441 44

Ravvin, Leon J.
Linda
Ofc. 1221 S. Broadway
Lexington, 40504
606-255-6841
Res. 1064 Turkey Foot
Lexington, 40502
606-269-4130
NS 5088 67

Ray, Edward H.
Louise
Ofc. 1009 Turkey Foot Rd.
Lexington, 40502
Res. 1009 Turkey Foot Rd.
Lexington, 40502
606-269-8382
U 1701 22

Ray, Jr., Edward H.
Grandison
Ofc. 2101 Nicholasville
Lexington, 40503
606-277-5766
Res. 1413 California Park
Lexington, 40502
606-266-7696
U 1701 53

Reams, Harold L.
Ginny
Ofc. 2505 Larkin Ave.
Lexington, 40503
606-278-9371
Res. 620 Tally
Lexington, 40502
606-266-6771
OTO 4105 67

Resinger, Harold E.
Ofc. Box 11750
Lexington, 40577
606-255-3676
Res. 240 Rose Hill
Versailles, 40383
PATH 2405 54

Reusche, Juan M.
Ofc. 1517 S. Limestone
Lexington, 40503
606-278-5479
Res. 3386 Fraserdale Drive
Lexington, 40503
606-278-6657
R 8401 49

Reynolds, L. Raymond
Denise
Ofc. 1221 So. Broadway
Lexington, 40504
606-255-6841
Res. 153 Cherokee Park
Lexington, 40503
606-277-3051
IM 1612 71

Ridenour, Jr., James C.
Susan P.
Ofc. 3320 Tates Creek
Lexington, 40502
606-268-1030
Res. 1412 Lookout Circle
Lexington, 40502
606-269-6413
ANES 4106 67

Rider, Joan E.
Claude Trapp
Ofc. 1701 Alexandria Dr.
Lexington, 40504
606-277-1600
Res. 1045 Lane Allen
Lexington, 40504
606-277-1600
PD 3120 50

Riegler, Sandra L.
Ofc. UKMC, IM C-502
Lexington, 40536
606-233-5981
Res. 3029 Stanford Drive
Lexington, 40503
606-272-8759
IM 3441 73

Riggs, R. Kathleen
Ofc. 660 N. Broadway
Lexington, 40508
606-255-8422
Res. 1616 Versailles Road
Lexington, 40504
606-253-3046
P 1612 74

Robertson, Jr., David
Res. 1205 Fincastle
Lexington, 40502
EM 1612 77

Robertson, Jr., William C.
Jo Brent Miller
Ofc. 1221 South Broadway
Lexington, 40504
606-155-6841
Res. RR #1, Harrodsburg Road
Lexington, 40504
606-277-5864
N 1005 67

Roeckel, Irene E.
Ofc. CKBC 330 Waller Ave.
Lexington, 40504
606-255-8787
Res. 4227 Kearney Rd.
Lexington, 40511
606-254-5127
PATH 6801 48

Rogers, Edwin L.
Randy
Ofc. 1800 So. Limestone
Suite 204
Lexington, 40503
606-177-7174
Res. 1505 Mt. Rainier Dr.
Lexington, 40502
606-272-6578
SU 1612 76

Rosenbaum, Harold D.
Doris
Ofc. UKMC
Lexington, 40536
606-233-5245
Res. 3605 Gloucester Dr.
Lexington, 40510
606-252-3601
R 2001 44

Ross, James E.
Donna
Ofc. 2370 So. Limestone
Lexington, 40503
606-278-2354
Res. 1763 Tates Creek Pike
Lexington, 40502
606-269-5406
SU 1602 54

Rubin, Saul
Audrey
Ofc. Citizens Bank Sq.
Lexington, 40507
606-254-0309
Res. 124 Eastin Road
Lexington, 40505
606-299-4576
ANES 1001 43

Ruff, John D.
Barbara
Ofc. 1517 Nicholasville Rd.
Lexington, 40503
606-278-2385
Res. 5742 Athens
Walnut Hill Pk.
Lexington, 40515
606-266-0883
IM 3901 46

Russell, James E.
Sue
Ofc. 2537 Larkin Rd.
Lexington, 40503
606-277-5703
Res. 652 Tally Rd.
Lexington, 40502
606-266-0149
ORS 4105 62

FAYETTE

Sachatello, Charles R.
Suzanne
Ofc. UKMC
Lexington, 40536
606-233-6011
Res. 3128 Worren Wood Wynd
Lexington, 40502
606-266-3715
SU 601 61

Saha, Sibu P.
Becky
Ofc. 168 Burt Rd.
Lexington, 40503
606-277-7129
Res. 637 Centennial
Lexington, 40502
606-269-5115
TS 5088 66

Sajadi, Koorcs
Pat
Ofc. 333 Waller Ave.
Lexington, 40504
606-254-8008
Res. 1335 Prother Road
Lexington, 40502
606-266-6674
ORS 7102 64

Sandler, Nat H.
Judy
Ofc. 1944 Bloirmore Rd.
Lexington, 40502
606-278-7811
Res. 1944 Bloirmore Road
Lexington, 40502
606-269-1150
P 4106 63

Sartini, John C.
Kothy
Ofc. 1221 So. Broodwoy
Lexington, 40504
606-278-7811
Res. 1022 Richmond Rood
Lexington, 40502
606-269-9440
C 3145 74

Saunders, Joseph H.
Vee
Ofc. 1517 So. Limestone
Lexington, 40503
606-177-4403
Res. 229 Shody Lone
Lexington, 40503
606-277-2082
OPH 1701 37

Saunders, John H.
Heather
Ofc. 1517 Nicholosville Rd.
Lexington, 40503
606-277-4403
Res. 2017 Bomboo Drive
Lexington, 40513
606-266-2292
OPH 1701 75

Saykaly, Ronald J.
Tereso
Ofc. 1800 Nicholosville Rd.
Lexington, 40503
606-276-4102
Res. 806 Overbrook Circle
Lexington, 40502
606-278-1353
IM 0414 69

Schindler, Stephen C.
Sherry
Ofc. 2366 Nicholasville Rd.
Lexington, 40503
606-278-8486
Res. 1232 Eldemere Rd.
Lexington, 40502
606-266-1087
GE 2434 61

Schmidt, Joseph E.
Joyce
Ofc. 3018 Montavesto Dr.
Lexington, 40502
606-254-1336
Res. 3018 Montovesto Dr.
Lexington, 40502
606-266-7685
ANES 1612 70

Schulte, William V.
Elizobeth
Ofc. 135 E. Maxwell St.
Lexington, 40508
606-233-1652
Res. 102 Eostin Rood
Lexington, 40505
606-299-8229
OBG 1602 46

Schumer, Barry
Kothleen
Ofc. 1725 Horrodsburg Rd.
Lexington, 40504
606-276-4486
IM 0411 78

Scott, Caroline P.
Res. 424 West Second
Lexington, 40508
606-252-4743
PD 3701 33

Scott, A. Thornton
Cotherine L.
Ofc. 1386 Lokewood Dr.
Lexington, 40502
Res. 1386 Lakewood Drive
Lexington, 40502
606-266-8362
IM 3120 34

Scott, Carl H.
Jone
Ofc. 2130 Nicholosville Rd.
Lexington, 40503
606-277-7149
Res. 8673 Adoms Lane
Lexington, 40515
606-255-3636
PD 1602 50

Scott, Samuel R.
Ofc. UKMC Medicine
Lexington, 40536
606-233-5981
Res. 1302 Richmond Road
Lexington, 40502
606-266-1916
IM 3205 69

Scully, Kevin T.
Karen K.
Ofc. 1800 Nicholosville Rd., 306
Lexington, 40503
606-276-4316
Res. 1309 Confederote Court
Lexington, 40503
606-223-5328
IM 1612 76

Sears, Jane B.
Ofc. 1715 Foirwoy Dr.
Lexington, 40502
606-252-0551
Res. 1715 Foirwoy Drive
Lexington, 40502
606-266-8043
IM 2001 51

Sebastian, Wilson
Judy
Ofc. 2366 Nicholosville Rd.
Lexington, 40503
606-278-8486
Res. 441 Bristol Rd.
Lexington, 40502
GE 1612 68

Selke, Albert C.
Morion
Ofc. Dept. Diog. Rod.—UKMC
Lexington, 40536
606-233-5228
Res. 804 Old Dobbin Road
Lexington, 40502
606-269-2676
R 3701 59

Sheikh, Hamid H.
Ofc. 1725 Harrodsburg Rd.
#H-2
Lexington, 40504
606-277-1139
Res. 2156 Islond Drive
Lexington, 40502
606-269-5791
OBG 8305 68

Shepard, Robert D.
Frances
Ofc. 310 So. Limestone
Lexington 40508
606-254-2778
Res. 2053 Fontoine Rood
Lexington, 40502
606-266-6054
R 2605 41

Shier, Robert W.
Elizobeth M.
Ofc. 483 Hort Rd.
Lexington, 40502
606-253-2246
Res. 483 Hort Rood
Lexington, 40502
606-269-1978
OBG 1612 68

Shine, Lee C.
Foith
Ofc. 2370 Nicholosville Rd.
#101
Lexington, 40503
606-277-5716
Res. Totes Creek Pike
Lexington, 40502
606-272-4171
IM 4105 59

Sirkle, Robert M.
Lou
Ofc. 500 Southland Dr.
Lexington, 40503
606-277-2211
Res. 235 Chinoe Rood
Lexington, 40502
606-266-2511
FP 3441 39

Sklar, Allen L.
Ellen
Ofc. Stud. Heolth, UKMC
Lexington, 40536
606-233-6471
Res. 668 Teokwood Drive
Lexington, 40502
606-269-3007
FP 1901 50

Slabaugh, Raymond M.
Ethelene
Ofc. 220 Kingswoy Dr.
Lexington, 40502
606-266-2503
Res. 220 Kingswoy Drive
Lexington, 40502
606-266-2503
U 3440 39

Slabaugh, Thomas K.
Ofc. 1725 Horrodsburg Rd.
Suite F2
Lexington, 40504
606-277-2280
Res. 3306 Brookhill Circle
Lexington, 40503
606-277-6522
U 4501 73

Slusher, Eugene
Mellono
Ofc. 1221 So. Broodwoy
Lexington, 40504
606-255-6841
Res. 3581 Gloucester Dr.
Lexington, 40511
R 1602 59

Smith, Mary N.
Ofc. 1517 So. Limestone
Lexington, 40503
606-276-4414
Res. Route #4
Poris, 40361
606-362-4213
P 3119 45

Smith, Clifton
Renee
Ofc. 2101 Nicholosville Rd.
#301
Lexington, 40503
606-276-1511
Res. 771 Chinoe Rd.
Lexington, 40502
606-269-3295
D 2402 69

Smith, Richard F.
Mory Gus
Ofc. 2101 Nicholosville Rd.
#307
Lexington, 40503
606-276-1456
Res. 715 Kirkland Drive
Lexington, 40502
606-277-7955
OTO 1612 74

FAYETTE

Sparrow, John C.
Jo Ann
Ofc. 1221 S. Broodwoy
Lexington, 40504
606-255-6841
Res. 1221 S. Broodwoy
Lexington, 40502
OPH 3701 68

Spencer, Herbert H.
Dorothy
Ofc. VA Med. Ctr., Chief of Staff
Lexington, 40511
606-233-4511
Res. 1684 Williomsburg Rd.
Lexington, 40504
606-276-4521
IM 2101 50

Spencer, Jr., Earle E.
Ofc. 1725 Horrodsburg Rd.
Lexington, 40504
606-277-2626
Res. 517 Springhill Dr.
Lexington, 40504
606-276-4270
IM 1701 52

Sprague, John S.
Louise
Ofc. 701 Kirkland Dr.
Lexington, 40502
Res. 701 Kirklond Dr.
Lexington, 40502
606-277-4826
SU 1907 36

Stahmann, Fred D.
Dione
Ofc. 1221 So. Broodwoy
Lexington, 40504
606-255-6841
Res. 2040 Monor Dr.
Lexington, 40502
606-268-1691
C 1206 67

Stambaugh, James L.
Miriom
Ofc. 1221 So. Broodwoy
Lexington, 40504
606-255-6841
Res. 517 Ridge Rd.
Lexington, 40503
606-277-7433
OPH 1602 48

Stauffer, W. Roy
Ofc. 1800 So. Limestone
Lexington, 40503
606-278-0319
Res. 543 Loketower Drive
Lexington, 40502
606-266-4239
PUD 1612 70

Stevens, David B.
Sally
Ofc. Shrin. Hosp/1900 Richmond Rd.
Lexington, 40502
606-266-2101
Res. 346 Jesselin Dr.
Lexington, 40503
606-277-3690
ORS 1206 55

Stigall, Ben C.
Betty
Ofc. 2620 Wilhite Dr.
201 Fr. Bldg
Lexington, 40503
606-278-9451
Res. 3321 Broemer Dr.
Lexington, 40502
606-277-9531
ENT 1602 48

Stillner, Verner
Morionne
Ofc. 3050 Rio Doso Dr.
Lexington, 40509
606-269-2325
Res. 717 Beechmont
Lexington, 40502
606-266-6470
P 2107 67

Stith, James B.
Matildo
Ofc. Rt. 1, Russell Cove Rd.
Paris, 40361
Res. Rt. 1, Russell Cove Rd.
Paris, 40361
606-987-2477
OBG 1602 44

Stoeckinger, John M.
Alice Joan
Ofc. 2368 Nicholasville Rd.
Lexington, 40503
606-277-5711
Res. 428 Bristol Rood
Lexington, 40502
606-266-8200
SU 1602 62

Stoll, Jr., Walter W.
Vickie Stoll
Ofc. 1412 No. Broodway
Lexington, 40505
606-233-4373
Res. 709 Old Dobbin Rood
Lexington, 40502
FP 3440 62

Stone, James L.
Betty R.
Ofc. P.O. Box 11750
Lexington, 40577
606-255-3676
Res. 2068 Norborne Dr.
Lexington, 40502
606-269-1032
PATH 3702 56

Storey, Benjamin B.
Becky
Ofc. 2101 Nicholasville Rd. 107
Lexington, 40503
606-176-1444
Res. 1660 Lakewood Dr.
Lexington, 40502
P 3120 63

Storrow, Hugh A.
Marilyn H.
Ofc. UKMC—Dept. of Psychiotry
Lexington, 40536
606-233-5792
Res. 3050 Kirklevington Dr.
#102
Lexington, 40502
606-272-8258
P 406 50

Straub, James G.
Corol
Ofc. 2620 Wilhite Dr.
Lexington, 40503
606-277-6102
Res. 652 Teokwood
Lexington, 40502
606-266-7884
PD 1612 71

Sublett, Daniel V.
Elsie
Ofc. 395 Redding Rd. #31
Lexington, 40502
Res. 395 Redding Rd. #31
Lexington, 40502
ENT 1602 27

Suruda, Anthony J.
Ofc. 1055 Dove Run Rd.
Lexington, 40502
606-269-4668
Res. 730 Sunset Drive
Lexington, 40502
606-266-2232
EM 1907 71

Swan, David S.
Reo F.
Ofc. 343 Woller Ave.
Lexington, 40504
606-252-4455
Res. 3426 Pepperhill Drive
Lexington, 40502
OBG 2107 62

Swartz, William T.
Lindo
Ofc. 135 Eost Moxwell #204
Lexington, 40508
606-254-6572
Res. 212 Boywood Drive
Nicholasville, 40356
606-223-5901
SU 1206 45

Sweeney, Jr., Garnett J.
Shelley
Ofc. 597 Clinton Rd.
Lexington, 40502
606-278-3481
Res. 537 Clinton Rd.
Lexington, 40502
606-276-2376
ORS 1612 67

Taormina, Vincent
Delores
Ofc. 2101 Nicholasville Rd. 402
Lexington, 40503
606-276-5465
Res. 762 Bravington Woy
Lexington, 40503
606-277-3577
N 4501 59

Tarkington, Charles N.
Evelyn
Ofc. Lexington Clinic
Lexington, 40504
606-255-6841
Res. 1861 Porkers Mill Rd.
Lexington, 40504
606-252-2188
OBG 2434 53

Taylor, Charles W.
Alice
Ofc. 1725 Horrodsburg Rd.
Lexington, 40504
606-278-0396
Res. 4009 John Alden Rd.
Lexington, 40504
606-252-3807
PD 4705 58

Taylor, Ellis R.
Ofc. 135 Eost Moxwell St.
Lexington, 40508
606-255-7918
Res. 3503 Cheddington Lone
Lexington, 40502
606-269-3539
IM 2402 53

Thompson, Robert B.
Carol
Ofc. 1221 So. Broodwoy
Lexington, 40504
606-255-6841
Res. 2086 Old Nossou Rd.
Lexington, 40504
606-278-3083
OBG

Thompson, Dorothy J.
Ofc. 1517 Nicholosville Rd.
Lexington, 40503
606-278-5435
Res. 751 Sherwood Drive
Lexington, 40502
606-277-9438
OBG 1612 77

Thompson, John S.
Helen
Ofc. Chm. of Medicine, UKMC
Lexington, 40536
606-233-6107
Res. 895 Edgewoter Dr.
Lexington, 40502
606-266-9184
IM 53

Thompson, Jr., Kearns R.
Soro
Ofc. 135 E. Moxwell St.
Lexington, 40508
606-253-0124
Res. 1828 Richmond Rood
Lexington, 40502
606-266-4774
ORS 3207 43

Tibbs, Philip A.
Alexis
Ofc. UKMC Neurosurgery
Lexington, 40536
606-233-5861
Res. 1503 Totes Creek Rd.
Lexington, 40502
606-266-9341
NS 1612 73

Tisdall, Ouida F.
Hoy W. Potton
Ofc. 1221 So. Broodwoy
Lexington, 40504
606-255-6841
Res. 240 Chinoe Road
Lexington, 40502
606-269-8324
R 1612 70

FAYETTE

Todd, Edward P.
Marilyn
Ofc. UKMC—Surgery
Lexington, 40536
606-233-6494
Res. 604 Goloxie Dr.
Lexington, 40502
606-266-4075
TS 4204 68

Trapp, Claude W.
Joon Rider
Ofc. 141 N. Upper St.
Lexington, 40507
606-254-8308
Res. 1045 Lone Allen
Lexington, 40504
606-277-1600
OPH 3120 50

Travis, Russell L.
Soro Goil
Ofc. 152 W. Zondole Dr.
Lexington, 40503
606-277-6143
Res. 744 Cottoge Grove Ln.
Lexington, 40503
606-266-0684
NS 1602 62

Trevey, John E.
Mory Jo
Ofc. IBM, New Circle Rd.
Lexington, 40511
606-232-3045
Res. 5241 Totes Creek Rd.
Lexington, 40515
606-272-8822
OM 4504 59

Trostel, Manfred E.
Dionne
Ofc. 1221 So. Broadway
Lexington, 40504
606-255-6841
Res. 1111 Athenio Drive
Lexington, 40504
606-278-5305
OBG 3713 72

Tucker, Thomas T.
Ofc. 310 So. Limestone
Lexington, 40508
606-254-2778
Res. 350 Glendover Road
Lexington, 40503
606-269-7859
R 1602 74

Tufts, Kenneth C.
Karen
Ofc. 132 Burt Rd.
Lexington, 40503
606-278-8467
Res. 764 Malobu Dr.
Lexington, 40502
606-277-2790
IM 3440 56

Tutt, Henry P.
Sandy
Ofc. 1221 So. Broodwoy
Lexington, 40504
606-255-6841
Res. 1125 The Lane
Lexington, 40504
606-277-1865
NS 3201 65

Tuttle, Jr., John P.
Pamela
Ofc. 1725 Harrodsburg Rd.
Lexington, 40504
606-277-2280
Res. 3089 Montavesto Rood
Lexington, 40502
606-266-5954
U 1612 73

Twyman, Don G.
Glendo L.
Ofc. 3008 Dartmouth Dr.
Lexington, 40503
EM 1612 80

Umesh, Janivara P.
Lokshmi
Ofc. 2011 Rambler Rd. Suite 2
Lexington, 40503
606-278-0323
Res. 3525 Totes Creek, Apt 63
Lexington, 40502
606-273-7431
IM

Underwood, William L.
Ofc. 1221 So. Broadwoy
Lexington, 40504
606-255-6841
Res. 395 Redding Rood 54
Lexington, 40502
606-272-0226
PD 4105 64

Van Meter, Jr., Jesse O.
Louise
Ofc. 288 S. Limestone
Lexington, 40508
606-255-5053
Res. 262 S. Ashlond Ave.
Lexington, 40502
606-266-6522
IM 4501 44

Van Nagell, John R.
Betsy
Ofc. UKMC OB-GYN
Lexington, 40536
606-233-5553
OBG 3701 67

VanBussum, Robert R.
Cindy
Ofc. 820 S. Limestone Annex 4
Lexington, 40536
606-233-6371
Res. 1227 Alexondrio Drive
Lexington, 40504
606-252-3806
FP 1612 81

Vandiviere, H. Mac
Irene
Ofc. MN102 Dept. Pediotrics,
UKMC
Lexington, 40536
606-233-6774
Res. 3429 Brookhaven Drive
Lexington, 40502
606-278-7081
PD 3201 60

Vigh, Alexander L.
Susonyo
Ofc. 1725 Horrodsburg Rd.
Suite M
Lexington, 40504
606-278-0471
Res. 2640 Gloucester Drive
Lexington, 40511
606-255-4080
OBG 1901 72

Vijayaraghavan, M.S.
Sowmyo
Ofc. 1800 So. Limestone, 303
Lexington, 40503
606-278-2378
Res. 2120 Monor Drive
Lexington, 40502
606-268-2112
GE 7034 72

Vinson, III, Carey T.
Tracey G.
Ofc. 650 Newtown Pike
Lexington, 40508
Res. 507 Loke Tower Drive
No. 432
Lexington, 40502
606-268-2034
FP 1602 78

Wagner, Jr., William H.
Sheilogh
Ofc. 2028 Regency Rd.
Lexington, 40503
606-276-4383
Res. 1065 Delong Rd.
Lexington, 40515
606-272-4191
OBG 1612 65

Wakefield, Donald L.
Susie
Ofc. 2366 Nicholosville Rd.
#603
Lexington, 40503
606-278-3436
Res. 3414 Bayleaf Dr.
Lexington, 40502
606-269-3961
C 1320 69

Wallace, Leonard E.
Beth
Ofc. 135 E. Maxwell St.
Lexington, 40508
606-255-3676
Res. 1625 Kensington Woy
Lexington, 40503
606-254-9804
PATH 2605 56

Wallace, Gary R.
Fernito
Ofc. 1221 So. Broadwoy
Lexington, 40504
606-255-6841
Res. 795 Lokeshore
Lexington, 40502
606-266-5162
OPH 1612 66

Walsh, William V.
Moxine
Ofc. 1832 Versoilles Rd.
Lexington, 40504
606-252-0886
Res. 395 Redding Rd., No. 26
Lexington, 40502
606-272-2536
P 2204 38

Walsh, John W.
Ruth
Ofc. MS 107 UKMC
Lexington, 40536
606-233-5861
Res. 395 Redding Rd. #2
Lexington, 40502
606-272-8133
NS 414 66

Walton, Jr., William W.
Helen
Ofc. 1221 So. Broodwoy
Lexington, 40504
606-255-6841
Res. 2020 Bloirmore Rd.
Lexington, 40502
606-266-7698
SU 4501 70

Waltrip, William E.
Lois
Ofc. 3320 Totes Creek Rd.
Lexington, 40507
606-268-1030
Res. 1016 Richmond Rood
Lexington, 40502
606-266-2804
ANES 1602 60

Warfield, Robert B.
Ofc. 1630 Ashwood Dr.
Lexington, 40502
Res. 1630 Ashwood Drive
Lexington, 40502
606-266-5904
PD 3702 33

Warren, A. Samuel
Anne B.
Ofc. 2368 Nicholasville Rd.
Lexington, 40503
606-277-5761
Res. 156 Mt. Tobor Rd.
Lexington, 40502
606-266-8214
IM 4105 40

Watson, Ben E.
Mildred
Ofc. 1221 So. Broodwoy
Lexington, 40504
606-255-6841
Res. 3188 Roxburg
Lexington, 40503
606-277-6379
GE 1701 59

Weed, Catherine A.
Res. UKMC, Emerg. Med., H134
Lexington, 40536
EM 301 81

Weitzel, William D.
Joan
Ofc. Suite 302
135 E. Maxwell St.
Lexington, 40508
606-255-9156
Res. 330 Chinoe Road
Lexington, 40502
606-269-5744
P 2434 68

Wells, Francis B.
Dorothy
Ofc. 141 No. Upper St.
Lexington, 40507
606-254-2787
Res. 1490 Forbes Road
Lexington, 40505
606-252-6143
OPH 1602 54

Wells, Sharon E.
Ron Fulkerson
Ofc. UKMC Emergency Med.
Lexington, 40536
606-233-5908
Res. 1832 McDonald Avenue
Lexington, 40503
606-278-9627
EM 1612 78

West, Wilk O.
Peggy
Ofc. 350 Elaine Dr.
Lexington, 40504
606-252-7563
Res. 2087 Norborne Drive
Lexington, 40502
606-266-9820
IM 4504 55

Whayne, Jr., Thomas F.
Genie
Ofc. Lexington Clinic,
1221 So. Broadway
Lexington, 40504
606-255-6841
Res. 813 Cahaba Road
Lexington, 40502
606-277-8985
C 3701 63

Whayne, Sr., Tom F.
Mary
Ofc. 623 Tateswood Dr.
Lexington, 40502
Res. 623 Tateswood Drive
Lexington, 40502
606-266-5831
ADM 2402 31

Wheeler, Betty S.
John T. Shouse
Ofc. 820 Chevy Chase Place
Lexington, 40502
606-266-3139
Res. 410 Holiday
Lexington, 40502
606-266-4583
GP 1602 51

Wheeler, William G.
Lucy A.
Ofc. 2537 Larkin Rd.
Lexington, 40503
606-277-5703
Res. 241 Desha
Lexington, 40502
606-269-5914
ORS 4105 60

Wheeler, William B.
Ann
Ofc. 1725 Harrodsburg Rd.
Lexington, 40504
606-276-1578
Res. 145 Cherokee Park
Lexington, 40503
606-278-1981
OBG 1612 72

Wheeler, Jr., Carl L.
Velda
Ofc. 941 Lyle Rd.
Georgetown, 40324
502-863-5241
Res. 941 Lyle Road
Georgetown, 40324
502-863-5241
PD 1602 37

Whitehouse, A. J.
Verna
Ofc. 1092 Indian Mound
Lexington, 40502
Res. 1092 Indian Mound Road
Lexington, 40502
606-266-1430
OBG 3120 28

Wiebe, P. Lawrence
Sandra K.
Ofc. 3320 Tates Creek Rd. 202
Lexington, 40502
606-268-1040
Res. 3399 Snaffle Road
Lexington, 40513
606-223-1171
ANES 2406 66

Wiegert, H. Thomas
Olga
Ofc. Family Practice, UKMC
Lexington, 40536
606-233-6418
Res. P.O. Box 22233
Lexington, 40522
606-266-5958
FP 4604 55

Wiesel, Carl
Edith
Ofc. 1216 So. Broadway
Lexington, 40504
606-252-6182
Res. 111 Eastin Road
Lexington, 40505
606-299-5835
P 2101 39

Wightman, Jr., E. Thomas
Dorothy
Ofc. 1800 S. Limestone Suite 202
Lexington, 40503
606-277-6153
Res. 109 Tahoma Road
Lexington, 40503
606-277-2133
FP 1612 76

Wilbur, Cornelia B.
Ofc. 2050 Regency Rd.
Lexington, 40503
606-277-7513
Res. 408 Bristol Road
Lexington, 40502
P 2101 39

Wilhite, James G.
Jo
Ofc. 1088 Nandino
Lexington, 40511
606-233-2873
Res. 1899 Parkers Mill Road
Lexington, 40504
606-254-8284
PD 4106 57

Wilkes, James C.
Gayle
Ofc. 818 Chevy Chase Pl.
Lexington, 40502
606-269-4604
Res. 905 Turkey Foot Road
Lexington, 40502
606-269-2702
PD 1612 75

Wilson, Emery A.
Clara
Ofc. MN 330 UKMC
Lexington, 40536
606-233-5410
Res. 986 Lakeland Drive
Lexington, 40502
606-269-7539
OBG 1612 68

Woods, Sheila H.
Jeffrey A.
Ofc. 422 Codell Dr.
Lexington, 40509
606-268-1606
Res. 5464 Sulphur Well Road
Lexington, 40511
606-269-7420
PD 1612 79

Woods, II, Robert D.
Ofc. 2368 Nicholasville Rd.,
#305
Lexington, 40503
606-276-4838
Res. 407 Hart Rd.
Lexington, 40502
606-266-9700
OTO 1612 75

Woodward, T. Allen
Jacquire
Ofc. 2620 Wilhite Dr.
Lexington, 40503
606-277-6102
Res. Route 8, Spurr Road
Lexington, 40511
606-254-0127
PD 4105 67

Yarbro, Marina T.
Jos. Garrett
Ofc. 1750 Alexandria Dr.
Lexington, 40504
606-278-8471
Res. Route 3, Paris Pike
Lexington, 40505
606-299-5530
PD 8401 55

Yates, Walter F.
Jean
Ofc. 1636 Nicholasville Rd.
Lexington, 40503
606-277-0029
Res. 3423 Briarcliff Drive
Lexington, 40502
606-277-0029
PD 1602 59

Yon, Jerry L.
Pamela
Ofc. 1221 So. Broadway
Lexington, 40504
606-255-6841
Res. 240 Pindell Ct.
Lexington, 40503
606-272-8377
GE 1211 70

Young, Paul G.
Sara
Ofc. One St. Joseph Dr.
Lexington, 40504
606-278-3436
Res. 239 S. Hanover Avenue
Lexington, 40502
606-266-8965
PATH 1602 63

Young, A. Byron
Judy
Ofc. UKMC, Neurosurgery
Lexington, 40536
606-233-5861
Res. 2040 Von List Way
Lexington, 40502
NS 1612 65

Zarocostas, George
Ofc. 1517 Nicholasville Rd.
Lexington, 40503
606-278-2349
Res. 2232 Dinsmore Apt. 27
Lexington, 40502
606-269-1330
OTO 3901 65

Zerga, III, Joseph L.
Carolyn
Ofc. 2368 Nicholasville Rd.
Lexington, 40503
606-278-3004
Res. 608 Lakeshore Drive
Lexington
606-269-2489
N 1602 74

FLEMING

Fidler, Robert W.
Helen J.
Ofc. Elizaville Rd. P.O. Box 346
Flemingsburg, 41041
606-849-2318
Res. Rt. 2
Flemingsburg, 41041
FP 1602 54

Gehring, Samuel W.
Doris
Ofc. P.O. Box 381
Flemingsburg, 41041
606-845-2931
Res. Rt. 1 Box 1
Flemingsburg, 41041
606-845-0571
FP 1602 62

Jarrett, Robert T.
Ofc. Rt. 2, Bax 297
Flemingsburg, 41041
606-849-2394
Res. Rt. 2, Bax 297
Flemingsburg, 41041
606-267-6111
SU 1243 64

Rye, William A.
Carrie Jean
Ofc. Rt. #2
Flemingsburg, 41041
606-849-2344
Res. Flemingsburg, 41041
FP 1602 54

Womack, Glenn R.
Dalares
Ofc. P.O. Bax 344
Flemingsburg, 41041
606-849-2323
Res. Bax 344
Flemingsburg, 41041
606-845-5651
FP 1602 70

FLOYD

Adams, James D.
Juanita
Ofc. Tawn Center Bldg.
Prestansburg, 41653
606-886-8888
Res. Prestansburg, 41653
606-886-6119
GP 1602 60

Akhtar, Syed Hasan
Ofc. Archer Clinic
Prestansburg, 41653
606-886-8154
Res. Archer Clinic
Prestansburg, 41653
606-789-7662
C 7028 65

Allen, Claude L.
Ofc. Beaver Valley Clinic
Martin, 41649
606-285-3221
Res. Martin, 41649
606-285-9434
GP 1602 39

Arnett, Charles F.
Nan A.
Ofc. Archer Clinic
Prestansburg, 41653
606-886-8187
Res. Lakeview Village
Prestansburg, 41653
606-886-3095
FP 1602 72

Badrudduja, Syed G.
Meraj
Ofc. Archer Memarial Clinic
Prestansburg, 41653
606-886-8183
Res. Mays Branch
Prestansburg, 41653
606-886-1666
SU 7028 43

Chalothorn, Narong
Wantanee B.
Ofc. Archer Memarial Clinic 206
Prestansburg, 41653
606-886-2880
Res. Highland Reg. Med. Ctr.
Prestansburg, 41653
606-886-9148
OBG 9202 70

Cook, William B.
Janece W.
Ofc. Archer Memarial Clinic
Prestansburg, 41653
606-886-8184
Res. 834 N. Lake Dr.
Prestansburg, 41653
606-886-3672
SU 2007 57

Fairchild, John
Julia
Ofc. Regianal Med. Center
McDawell, 41647
606-377-2492
Res. McDawell, 41647
606-377-6894
PD

Gibson, Miles K.
Teresa R.
Ofc. Patter Clinic
Lackey, 41643
606-358-2381
Res. 417 Scatt Caurt
Prestansburg, 41653
606-886-6795
GP 1612 81

Halbert, Allan D.
Denise I.
Ofc. P.O. Bax 1008
Martin, 41649
606-285-3261
Res. Tawn Hall Additian
Allen, 41601
606-874-9546
FP 1602 79

Hall, Mary A.
Ofc. Regianal Medical Center
McDawell, 41647
606-377-2492
FP 1602 63

Hieronymus, Jr., Chas.
Ofc. Archer Memarial Clinic
Prestansburg, 41653
FP 1612 72

Hyden, Alan J.
Betty
Ofc. Narth Lake Dr.
Prestansburg, 41653
606-886-9456
Res. Narth Lake Drive
Prestanburg, 41653
606-886-9940
FP 1612 74

Ikramuddin, Syed
Kamar
Ofc. Archer Memarial Clinic
Prestansburg, 41653
Res. Prestansburg, 41653
606-886-9123
SU 7028 64

Ikramuddin, Kamar J.
Ofc. Archer Memarial Hasp.
Prestansburg, 41653
OBG 7028 63

Jakobson, Peeter
Ofc. Highlands CAT Scanning, INC.
Prestansburg, 41653
606-886-9451
Res. Star Raute #5
Prestansburg, 41653
606-886-1528
R 5088 77

Joyce, Ellen M.
Ranald Martin
Ofc. Mud Creek Health Project
Grethel, 41631
606-886-1242
Res. Bax 133
Banner, 41603
606-874-9414
FP 2107 75

Jurich, Nicholas R.
Sheryl
Ofc. Archer Memarial Clinic
Prestansburg, 41653
Res. 203 Maple St.
Prestansburg, 41653
606-886-2280
FP 1612 70

Kunajukr, Sutip
Ofc. Star Rt. 2, Bax 297
Auxier Rd.
Prestansburg, 41653
606-886-9429
OBG 5088 68

Leslie, Rondall H.
Ofc. Archer Memarial Hasp.
Prestansburg, 41653
FP 1602 64

Leslie, Larry M.
Lynn
Ofc. Tawn Center Bldg.
Prestansburg, 41653
606-886-8174
Res. 15 Circle Dr.
Prestansburg, 41653
606-886-6143
FP 1612 74

Maddiwar, Gangadhar L.
Surekha
Ofc. Family Health Ctr. Bax 768
Martin, 41649
606-285-9221
Res. Martin, 41649
606-874-9946
SU 7013 62

Majmundar, Minaxi G.
Dr. Otapar
Ofc. Rt. 23 Narth, Auxierraad
Prestansburg, 41653
606-285-9000
Res. Bax 828
Martin, 41619
606-285-9000
ANES 5088 69

Martin, Lowell D.
Jaann
Ofc. Bax 890
Martin, 41649
606-285-3851
Res. Bax 890
Martin, 41649
606-285-9387
FP 1602 59

Param, Ekambaram
Ofc. Bax 1181
Paintsville, 41240
FP 5088 71

Potter, Ira B.
Ofc. Rt. 80
Lackey, 41643
606-358-2381
Res. Star Raute 2, Bax 50 C
Prestansburg, 41653
606-886-6206
FP 1612 70

Singayao, Ruben P.
Clarita
Ofc. P.O. Bax 209
McDawell, 41647
606-377-2492
Res. P.O. Bax 209
McDawell, 41647
606-377-2890
SU 8506 67

Sundaram, Raghu R.
Jhansi Laxmi
Ofc. Bax 910, Rt. 80 West
Martin, 41649
606-285-9221
Res. 243 Trimble Branch
Prestansburg, 41653
IM 7022 63

Valdez-Vicher, Clarita
Ofc. Regianal Med. Clinic
McDawell, 41647
377-2422
Res. Staff Hausing—ARCH
McDawell, 41647
377-2041
IM 5088 69

Verma, Prem S.
Krishna
Ofc. P.O. Bax 768
Martin, 41649
606-285-9221
Res. P.O. Bax 789
Martin, 41649
606-886-3638
FP 5088 61

White, David
Ofc. Highlands Regianal
Medical Cen
Prestansburg, 41653
606-866-6633
Res. Prestansburg General
Hospital
Prestansburg, 41653
R 1602 67

Young, Gordon C.
Ofc. 107 Graham St.
Prestansburg, 41653
606-886-8546
Res. 107 Graham Street
Prestansburg, 41653
606-886-1382
FP 1602 70

FRANKLIN

Auerbach, Robert E.
Sheryl
Ofc. 309 Shelby St.
Frankfart, 40601
502-223-5758
Res. 58 Timberlawn Circle
Frankfart, 40601
U 3709 64

Baker, Thomas H.
Taby L.
Ofc. 227 Hanna Place
Frankfart, 40601
502-223-2086
Res. 525 Leawaad Drive
Frankfart, 40601
502-223-5686
OBG 4105 56

Barr, Jr., James M.
Susanne
Ofc. 309 Shelby St. 109
Frankfart, 40601
502-223-3434
Res. Rt. #4, Bax 304
Lawrenceburg, 40342
502-839-7562
D 1612 69

Baughman, Branham B.
Matilda
Ofc. 401 W. Main
Frankfart, 40601
502-227-4663
Res. Weehawken Ln.
Frankfart, 40601
502-695-2325
SU 2101 29

Blackburn, Winfrey P.
May
Ofc. 226 St. Clair St.
Frankfart, 40601
502-227-4450
Res. Crescent Avenue
Frankfart, 40601
502-227-4764
SU 4105 30

Blair, Murvel C.
Ruth
Ofc. 4 Physician Park
Frankfart, 40601
Res. 415 Shelby St.
Frankfart, 40601
PD 1602 43

Blair, Robert A.
Kaye
Ofc. 4 Physician Park
Frankfart, 40601
Res. 118 Lee Dr.
Frankfart, 40601
PD 1602 69

Brennan, III, James M.
Shelley
Ofc. 4 Physicians Park
Frankfart, 40601
Res. Bax 108, Rt. F
Frankfart, 40601
PD 3440 75

Broderson, John P.
Barbara
Ofc. 625 Leawaad Dr. #105
Frankfart, 40601
502-223-8258
Res. 750 Lauisville Rd.
Frankfart, 40601
502-875-2016
OPH 1612 69

Brown, Buster F.
Marjarie L.
Ofc. 275 E. Main St.
Frankfart, 40601
502-564-4446
Res. 501 Pawnee Trail
Frankfart, 40601
502-695-3451
PH 1602 53

Carr, Carter B.
Judith D.
Ofc. 10 Sheffield Ln.
Frankfart, 40601
502-699-1542
EM 1612 71

Caton, John C.
Barbara
Ofc. Kings Daughters Hasp.
Frankfart, 40601
502-875-5240
Res. 417-C Harradswaad
Frankfart, 40601
502-875-4217
R 1612 69

Cheshire, Jr., John C.
Tina
Ofc. #4 Physicians' Park
Frankfart, 40601
502-875-1815
Res. 318 Parkwaad Place
Frankfart, 40601
OBG 1612 69

Clay, John B.
Jenny J.
Ofc. 245 Leawaad Ave.
Frankfart, 40601
502-564-5007
Res. 245 Leawaad Ave.
Frankfart, 40601
502-227-7933
IM 1602 51

Cowherd, Harry J.
Betty
Ofc. 625 Leawaad Dr.
Frankfart, 40601
502-223-3428
Res. 112 Lee Drive
Frankfart, 40601
502-223-3024
FP 1602 55

Cull, Leighton L.
Madalyn
Ofc. 103 W. Main St.
Frankfart, 40601
502-223-4161
Res. 233 Valley Vista Dr.
Frankfart, 40601
502-227-7461
SU 1602 28

Daniels, Charles A.
Markeata B.
Ofc. King's Daughters' Hasp.
Frankfart, 40601
Res. 309 Princess Circle
Versailles, 40383
606-873-3709
PATH 4105 66

Dobner, Joseph J.
Suzanne
Ofc. Kings Daugh. Hasp.
P.O.B. 1243
Frankfart, 40601
502-875-1766
Res. 727 Reed Drive
Frankfart, 40601
502-875-1094
ORS 3205 74

Douglas, David L.
Susan M.
Ofc. 4 Physicians Park
Frankfart, 40601
502-875-1815
Res. Raute 7
Frankfart, 40601
OBG 1602 71

Dudney, Jerald S.
Ellen
Ofc. 1 Physicians Pk.
Frankfart, 40601
502-227-7353
Res. 1033 Kimbel Dr.
Frankfart, 40601
IM 4105 74

Gergen, John A.
Jacqueline
Ofc. Bax 633
Frankfart, 40601
502-223-1479
Res. 304 Stanehedge
Frankfart, 40601
P 2001 57

Hanking, William H.
Ofc. P.O. Bax 425
Shelbyville, 40065
SU

Hernandez, Calixto
Jacqueline A.
Ofc. 601 Versailles Rd.
Frankfart, 40601
502-695-5844
Res. 60 Timberlawn Circle
Frankfart, 40601
502-695-1377
FP 5088 56

Holmes, Booker T.
Helen
Ofc. 300 E. Third St.
Frankfart, 40601
502-223-8646
Res. 318 Murray St.
Frankfart, 40601
502-223-0961
GP 4107 47

Howard, Donald E.
Ann H.
Ofc. 625 Leawaad Dr.
Frankfort, 40601
502-223-3428
Res. 505 Leawaad Dr.
Frankfart, 40601
502-223-3542
FP 1602 55

Hromyak, Jr., George F.
Cecelia B.
Ofc. Kings Daughters Hasp.
Frankfart, 40601
Res. 801 Brawns Ferry Rd.
Frankfart, 40601
502-875-1887
R 1612 69

Jackson, Billy J.
Mary Ja
Ofc. 4 Physicians Park
Frankfart, 40601
502-875-1815
Res. Highway 127
Frankfart, 40601
502-839-6309
OBG 1602 62

Keller, William H.
Jamie
Ofc. 4 Physicians Park
Frankfort, 40601
502-875-1815
Res. 107 Hay Avenue
Frankfart, 40601
502-875-1815
OBG 3441 61

Kimbel, Esten S.
Margaret
Ofc. #1 Physicians Park
Frankfart, 40601
502-227-7353
Res. Lucas Lane Rd. 6
Frankfart, 40601
502-695-1172
IM 1602 43

Kimbler, Richard W.
Sandra K.
Ofc. 1 Physicians Park Dr.
Frankfart, 40601
502-223-7629
Res. 300 Highpaint Caurt
Frankfart, 40601
502-223-1680
SU 1602 73

Kirk, Clyde R.
Viala
Ofc. 309 Shelby St.
Frankfart, 40601
502-223-8290
Res. 5116 Iranwarks Raad
Geargetawn, 40324
502-863-3723
OTO 4106 42

Lange, Amanda W.
Ofc. 309 Shelby St.
Frankfart, 40601
502-227-9620
Res. 120 West State
Frankfart, 40601
502-223-0440
FP 1612 71

Leonard, Thomas P.
Saris S.
Ofc. 14 Whitebridge Ln.
Frankfart, 40601
Res. 14 Whitebridge Raad
Frankfart, 40601
502-695-1080
R 1602 36

Leslie, Edward D.
Ofc. 440 King's Daughters Dr.
Frankfart, 40601
502-875-5500
Res. 846 Shelby
Frankfart, 40601
ORS 1612 67

Long, Russell S.
Martha C.
Ofc. 309 Shelby St. Suite 106
Frankfart, 40601
502-223-3417
Res. Rt. #2, Bax 240-A
Frankfort, 40601
502-223-3959
GP 1602 56

Martin, Jr., Edward K.
Mary M.
Ofc. 307 Washingtan St.
Frankfart, 40601
502-223-8385
Res. 307½ Washingtan
Frankfart, 40601
ANES 1602 61

McKee, Jr., Willis P.
Pamela J.
Ofc. One Physicians Park
Frankfort, 40601
502-223-7629
Res. 422 Harradswaad Raad
Frankfart, 40601
502-747-5091
SU 1602 63

Nicol, Patricia K.
Ofc. 275 E. Main St.
Frankfart, 40601
502-564-4830
Res. 275 East Main St.
Frankfart, 40601
502-695-3208
PH 1602 52

Offutt, Randolph L.
Julia N.
Ofc. 5 Physicians Park
Frankfart, 40601
502-227-4828
Res. Leestawn Raad
Midway, 40327
606-846-4404
OPH 1612 71

Parker, David H.
Ofc. 125 Oxfard Place
Frankfart, 40601
Res. 106 Oxfard Place
Frankfart, 40601
PD 1602 70

Patrick, Olney M.
Ofc. One Physicians Park
Frankfart, 40601
Res. P.O. Bax 811
Frankfart, 40601
SU 1602 58

Ramsey, James T.
Kathleen H.
Ofc. 309 Shelby St.
Frankfart, 40601
502-227-4538
Res. Westaver Drive
Frankfart, 40601
502-695-2077
FP 1602 49

Rawlings, John
Caral
Ofc. 3 Physicians Park
Frankfart, 40601
502-875-2090
Res. 107 Edgemant
Frankfart, 40601
SU 4105 53

Rice, Nelson T.
Angela M.
Ofc. 1740 S. Lime, C. Bapt. Hasp.
Lexingtan, 40503
606-278-3411
Res. 139 Bellemeade Dr.
Frankfart, 40601
502-223-2815
R

Rush, Willett H.
Ofc. P.O. Bax 427
Frankfart, 40601
502-227-7209
Res. 120 Tanglewaad Dr.
Frankfart, 40601
502-227-7494
FP 4105 41

Rush, Jr., Willett H.
Rasetta K.
Ofc. 309 Shelby St.
Frankfart, 40601
502-223-5758
Res. 213 Tanglewaad Dr.
Frankfart, 40601
502-875-5022
U 1612 70

Shroat, Carl E.
Jackie
Ofc. 859-B E. Main St.
Frankfart, 40601
502-223-2011
Res. 313 Westaver Rd.
Frankfart, 40601
502-695-1699
FP 1602 56

Simpson, III, Jim S.
Cinda Jo
Ofc. Diag. Rad.
Kings Daugh. Hasp.
Frankfart, 40601
606-278-3411
Res. 20 Glencave Dr.
Twa Creeks
Frankfart, 40601
502-695-5428
R 1001 74

Snyder, Grace R.
William S.
Ofc. 410 Wapping St.
Frankfart, 40601
502-227-7311
Res. 410 Wapping St.
Frankfart, 40601
502-227-7311
ENT 4504 26

Steinberg, Sidney R.
Ofc. One Physicians Park
Frankfart, 40601
502-223-7629
Res. 180 Waadgate Dr.
Frankfart, 40601
502-875-3753
SU 1612 65

Stewart, John P.
Milly An
Ofc. Stewart Schaal
Frankfort, 40601
502-227-4821
Res. Lawrenceburg Rd.
Frankfart, 40601
502-223-3370
R 3701 52

Stumbo, Warren G.
Jan
Ofc. Bax 1096
Frankfart, 40601
502-227-2672
Res. Rt. 2
S. Bensan Raad
Frankfart, 40601
502-223-7060
FP 1612 71

Taylor, Charles R.
Betty C.
Ofc. #7 Mills Ln. Rd.
Frankfart, 40601
Res. Rt. #7, Bax 586
Frankfart, 40601
502-223-0458
GP 1602 55

Thurber, Donald B.
Katheryne C.
Ofc. 1040 Alganquin Trail
Frankfart, 40601
502-695-1864
Res. 1040 Alganquin Trail
Frankfart, 40601
502-695-1864
PH 1602 36

FULTON

Blair David M.
Bianca
Ofc. 223 Carr St.
Fultan, 42041
502-472-3262
Res. R.R. 5, S. Fultan,
TN 38257
901-479-3496
GP 5903 79

Bushart, Glynn F.
Billie R.
Ofc. 302 Caurt St.
Fultan, 42041
502-472-1715
Res. 302 Caurt St.
Fultan, 42041
502-472-1715
GP 1602 29

Bushart, Robert W.
Sara
Ofc. 407 Third Ave.
Fultan, 42041
Res. 407 Third
Fultan, 42041
502-472-1441
GP 1602 30

Nelson, Andrew P.
Sue A.
Ofc. 300 N. Highland Dr.
Fultan, 42041
502-472-1612
Res. P.O. Bax E
Fultan, 42041
901-479-2700
GP 4106 60

Peterson, Jr., Robert T.
Ann L.
Ofc. 300 Na. Highland
Fultan, 42041
502-472-1612
Res. Deepwaad
Fulton, 42041
502-472-1449
GP 4106 59

Poe, Jean A.
Rubye
Ofc. 227 Commercial Ave.
Fultan, 42041
502-472-3262
Res. 300 Eddings St.
Fultan, 42041
502-472-1542
GP 4106 40

Ragsdale, Jr., John W.
Narma S.
Ofc. 300 N. Highland
Fultan, 42041
502-472-1612
Res. 1107 Walnut
Fultan, 42041
502-472-1868
GP 4106 57

Rudd, Russell R.
Frances
Ofc. 222 Cammercial Ave.
Fultan, 42041
502-472-1602
Res. 222 Cammercial Ave.
Fultan, 42041
GP 3402 28

White, Richard H.
Ofc. 629 E. Maultan
Hickman, 42050
GP 3713 49

GARRARD

Playforth, Otto S.
Charlatte A.
Ofc. 119 Haselden Heights
Lancaster, 40444
Res. 119 Haselden Heights
Lancaster, 40444
606-792-4902
GP 1602 51

Raitiere, Colin R.
Sherry
Ofc. 206 Lexingtan St.
Lancaster, 40444
606-792-3042
FP 402 77

Sides, Paul J.
Vivian
Ofc. 405 Danville St.
Lancaster, 40444
606-792-2124
Res. 209 West Maple Ave.
Lancaster, 40444
606-792-3163
FP 1602 46

GREEN

Cheatham, George C.
Sue D.
Ofc. 603 Columbia Rd.
Greenburg, 42743
502-932-4277
Res. 616 Columbia Rd.
Greensburg, 42743
502-932-7028
GP 1602 63

DiSimone, Kenneth J.
Brenda
Ofc. Rt. 1, Box 43
Greensburg, 42743
502-932-4203
Res. Rt. 1, Box 43
Greensburg, 42743
502-932-3279
SU 1602 54

Huntsman, Harry B.
Anne M.
Ofc. 603 Columbia Hwy.
Greensburg, 42743
502-932-4277
Res. 305 Cardinal Drive
Greensburg, 42743
502-932-7192
GP 1602 66

Miller, James W.
Nina
Ofc. RFD 1
Greensburg, 42743
502-932-5203
Res. R.F.D. 1, Box 1
Greensburg, 42743
502-932-4815
GP 1602 33

Shuffett, Robert L.
Ofc. Box E
Greensburg, 42743
GP 1602 46

Shuffett, William L.
Kathy L.
Ofc. 102 Public Square
Greensburg, 42743
Res. 102 S. Public Square
Greensburg, 42743
502-932-7769
GP 1612 72

Simmons, Robert P.
Barbara
Ofc. 112 S. Public Sq.
Greensburg, 42743
502-932-4284
Res. Route #5
Greensburg, 42743
502-932-4783
GP 1602 63

GREENUP

Boggs, James G.
Nancy R.
Ofc. 206 Houston St.
Russell, 41169
606-836-3912
Res. Meadowlark Ct. Kenwood
Russell, 41169
606-836-8400
FP 2015 42

Garcia, Manuel S.
Lillian B.
Ofc. 600 St. Christopher Dr.
Ashland, 41101
606-836-8833
Res. 104 Stoneybrooke Drive
Ashland, 41101
606-324-0988
SU 8507 57

Haeberle, Clarence I.
Geraldine
Ofc. 502 Etna St.
Russell, 41169
606-836-5313
Res. 502 Etna Street
Russell, 41169
606-836-3940
FP 3401 42

Jones, John O.
Patricia
Ofc. 1108 Powell Ln.
Flatwoods, 41139
606-836-8086
Res. 1030 Radford Dr.
Russell, 41169
606-836-3014
FP 1602 60

Lambert, Charles R.
Janice
Ofc. 905 Bellefont Rd.
Flatwoods, 41139
Res. 2642 Newman
Ashland, 41101
FP 1612 47

Procter, David H.
Ofc. Rt. 1, Box 413
South Shore, 41175
Res. 815 Main St.
South Shore, 41175
FP 5902 76

Roth, Oliver R.
Virginia L.
Ofc. Our Lady of
Bellefonte Hosp.
Ashland, 41101
606-836-8161
Res. 2912 Cogan
Ashland, 41101
606-329-9619
R 1901 50

Shah, Pravin
Ofc. R.R. 1, Box 1215
Greenup, 41144
Flatwoods, 41139
FP 5088 71

Stevens, Thomas E.
Lee
Ofc. 2225 Winchester Ave.
Ashland, 41101
606-329-2173
Res. 2205 Woodland Avenue
Ashland, 41101
606-325-8290
ANES 1206 64

Tigas, Lourente B.
Janet M.
Ofc. Our Lady of
Bellefonte Hosp.
Ashland, 41101
606-836-8161
Res. 3108 Greenhill Drive
Ashland, 41101
606-836-8303
PATH 8501 67

Unnikrishnan, Edakkunny W.
Usha
Ofc. 79 AR-400
St. Christopher Dr.
Ashland, 41101
606-836-2311
Res. 1005 McCown
Ashland, 41101
U 7005 68

Warrier, Rajkumar K.
Balamani R.
Ofc. 300 St. Christopher Dr.
Ashland, 41101
606-836-9644
Res. 263 Bellefonte Circle
Ashland, 41101
606-329-8343
GE 7005 70

GRANT

Goodman, R. Michael
Sheila R.
Ofc. 100 Cynthiana
Williamstown, 41097
606-824-5061
Res. Rt. #2 Falmouth Rd.
Williamstown, 41097
606-824-6916
FP 1602 70

Melton, Gary J.
Ruth Ann
Ofc. 11 So. Main
Dry Ridge, 41035
606-824-7111
Res. 26 Ridgeview Drive
Dry Ridge, 41035
606-824-7813
FP 1602 78

Scroggin, Frederick R.
Jane
Ofc. McBee Bldg.
Dry Ridge, 41035
606-824-4464
Res. 107 Ridgelea Drive
Williamstown, 41097
606-824-3379
GP 3441 41

Shipp, Darl B.
Linda
Ofc. 22 Broadway
Dry Ridge, 41035
Res. Taft Highway
Dry Ridge, 41035
606-823-7141
FP 1602 60

Waldrop, Claude C.
Lucille
Ofc. Rt. 3
Williamstown, 41097
Res. Grandview Hgts.
RFD #3, 41097
606-824-3318
GP 1602 42

GRAVES

Brodsky, Stuart L.
Jane
Ofc. P.O. Box 15
Mayfield, 42066
502-247-4080
Res. 501 South Eighth
Mayfield, 42066
502-249-9600
U 3702 67

Burnett, Jr., Clem F.
Evelyn
Ofc. 220 W. Walnut St.
Mayfield, 42066
502-247-8100
Res. 602 Usher
Mayfield, 42066
502-247-3144
IM 4504 49

Colley, Richard L.
Frances
Ofc. 203 E. North St.
Mayfield, 42066
502-247-2350
Res. 203 E. North St.
Mayfield, 42066
502-247-4597
FP 1602 50

Dillard, Francis J.
Ruth
Ofc. 220 W. Walnut
Mayfield, 42066
502-247-8100
Res. 800 Pryor
Mayfield, 42066
502-247-3022
IM 4504 49

Fields, Robert D.
Ofc. 220 W. Walnut St.
Mayfield, 42066
502-247-8100
Res. 503 Ushr
Mayfield, 42066
502-247-5468
SU 4106 66

Hall, Larry L.
Ofc. P.O. Box K
Mayfield, 42066
502-247-5015
Res. Rt. 7
Mayfield, 42066
GP 4106 63

Haugh, Donald C.
Janet
Ofc. 220 W. Walnut St.
Mayfield, 42066
502-247-8100
Res. 616 Chappell Caurt
Mayfield, 42066
502-247-2788
SU 3440 39

Howard, Charles E.
Fran
Ofc. 220 W. Walnut St.
Mayfield, 42066
502-247-8100
Res. 404 Narth 18th St.
Mayfield, 42066
502-247-7357
FP 2434 65

Jackson, Billy G.
Shelia
Ofc. Margan Haugh Clinic
Mayfield, 42066
502-247-8100
Res. 624 So. 7th St.
Mayfield, 42066
502-247-6799
GP 1602 57

Kamdar, Bharati A.
Anil Kamdar
Ofc. 220 W. Walnut
Mayfield, 42066
502-247-8100
Res. 220 W. Walnut
Mayfield, 42066
502-247-0946
PD 5088 75

LeNeave, Charles D.
Rita
Ofc. Cammunity Hasp.
Mayfield, 42066
502-247-8710
Res. 1332 Cherry Dr.
Mayfield, 42066
502-247-7182
R 1602 57

Mayer, Jacob M.
Belva I.
Ofc. 1213 W. Braadway
Mayfield, 42066
Res. 1213 W. Braadway
Mayfield, 42066
502-247-4434
SU 4105 31

McBee, Michael H.
Karen L.
Ofc. 220 W. Walnut
Mayfield, 42066
502-247-8100
Res. 610 Pryar
Mayfield, 42066
502-247-5840
SU 1612 73

Mills, Clarence J.
Ja
Ofc. 917 W. Braadway
Mayfield, 42066
502-247-4277
Res. Rt. #1
Clintan, 42031
502-653-8516
GP 1602 61

Morgan, A. Reeves
Marian
Ofc. 220 W. Walnut
Mayfield, 42066
502-247-8100
Res. 718 Chappell Ct.
Mayfield, 42066
502-247-4551
ENT 1602 46

Orr, Robert A.
Ann Elle
Ofc. 222 W. Water
Medical Arts
Mayfield, 42066
502-247-4411
Res. 707 Usher
Mayfield, 42066
502-247-3665
OBG 4106 36

Roach, Harry M.
Ruth S.
Ofc. 107 W. Braadway
Mayfield, 42066
Res. Paducah Raad
Mayfield, 42066
502-247-3542
GP 1502 40

Robbins, James S.
Mildred
Ofc. 222 W. Water
Medical Arts
Mayfield, 42066
502-247-4411
Res. Usher
Mayfield, 42066
502-247-4809
GP 4106 39

Robinson, Martha C.
Ofc. 220 W. Walnut St.
Mayfield, 42066
Res. 220 W. Walnut St.
Mayfield, 42066
FP 1612 68

Simpson, William B.
Dattie
Ofc. 220 W. Walnut
Mayfield, 42066
502-247-8100
Res. Chapel Caurt - 609
Mayfield, 42066
502-247-4461
OBG 4106 45

Slaughter, Joseph C.
Caral C.
Ofc. Margan Haugh Clinic
Mayfield, 42066
502-247-8100
Res. 1404 Belmeade Dr.
Mayfield, 42066
502-247-4166
IM 1612 75

Slizofski, Walter J.
Pamela L.
Ofc. c/a Cammunity Hasp.
Mayfield, 42066
502-247-8934
Res. 102 Linden Drive
Mayfield, 42066
502-247-9402
R 4105 74

Stone, Thomas B.
Frances
Ofc. 222 E. Water
Medical Arts
Mayfield, 42066
Res. 808 Pryar
Mayfield, 42066
PD 4105 41

Viles, Henry
Mary Jo
Ofc. 206 W. Sauth St.
Mayfield, 42066
502-247-5579
Res. Lakeview Drive
Mayfield, 42066
502-247-3918
PATH 6203 68

Williams, Wayne E.
Debarah H.
Ofc. Medical Arts Ctr.
Mayfield, 42066
502-247-2602
Res. 1362 Broadway
Mayfield, 42066
502-247-4154
FP 1602 78

GRAYSON

Bland, Charles L.
Ruby E.
Ofc. 305 W. Market St.
Leitchfield, 42754
502-259-4066
Res. 305 W. Market St.
Leitchfield, 42754
502-259-3911
GP 1602 44

Cave, Ray A.
Frances
Ofc. 310 South Main St.
Leitchfield, 42754
502-259-4666
Res. 600 Miller Ave.
Leitchfield, 42754
502-259-3634
FP 1602 60

Duvall, Victor F.
Joyce
Ofc. Clarksan Clinic
Clarksan, 42726
502-242-2311
Res. P.O. Bax 158
Clarksan, 42726
502-242-7475
FP 1602 67

Lee, Joseph M.
Nadyne S.
Ofc. 299 S. Wallace Ave.
Leitchfield, 42754
502-259-5641
Res. 299 S. Wallace Ave.
Leitchfield, 42754
502-259-5641
PD 1620 73

McClure, Larry T.
Brenda
Ofc. 104 Kelley Medical Ctr.
Leitchfield, 42754
502-259-5681
Res. 70 Cave Mill Ct.
Leitchfield, 42754
502-259-5896
FP 1602 75

HANCOCK

Smith, B. Presley
Ofc. Hawesville, 42348
GP 1602 53

Tan, Kok Liong Y. (David)
Glaria
Ofc. P.O. Bax 300
Lewisport, 42351
502-295-3750
Res. Riverview Drive
Lewispart, 42351
502-295-3850
N 5088 70

HENDERSON

Barnett, Fred
Wanda
Ofc. 736 Na. Elm St.
Henderson, 42420
502-827-4567
Res. 1244 Taransay Dr.
Hendersan, 42420
502-826-1282
PD 1602 71

Bland, Jack D.
Ofc. 110 Third St.
Hendersan, 42420
Res. 864 Watsan Ln.
Henderson, 42420
FP 1320 61

Brown, Randall S.
Libby
Ofc. 1413 N. Elm St.
Hendersan, 42420
502-826-2300
Res. RR 1, Bax 431-A
Hendersan, 42420
502-826-0099
FP 4202 75

Canlas, Noel D.
Alice
Ofc. Bax 1098
Hendersan, 42420
502-826-0002
Res. 6316 Shawnee Lane
Hendersan, 42420
502-826-1575
IM 8507 69

Cantley, Donald A.
Barbara
Ofc. 110 Third St.
Hendersan, 42420
502-827-3573
Res. 2429 N. Elm St.
Hendersan, 42420
502-826-9355
PD 102 51

Cole, Julian B.
Jane
Ofc. 214 Seventh St.
Hendersan, 42420
Res. 638 Na. Main St.
Henderson, 42420
GP 4106 42

HENDERSON

Crick, Larry G.
Cothy L.
Ofc. Imperiol Bldg.
110 3rd St.
Henderson, 42420
502-827-3573
Res. 1923 Sutton Drive
Henderson, 42420
502-827-0066
PD 3602 77

Cymbala, Bohdan
Pat
Ofc. P.O. Dr. 48
Henderson, 42420
502-827-9701
Res. 2111 Locust Dr.
Henderson, 42420
502-826-4416
PATH 5502 49

Davis, Robert
Ofc. RR #1, Box 431B
Henderson, 42420
502-826-6251
Res. RR #1, Box 431B
Henderson, 42420
R 1602 76

Day, Gustavo D.
Sonia D.
Ofc. 1413 N. Elm St. #105
Henderson, 42420
502-827-8662
Res. 1413 N. Elm St. #105
Henderson, 42420
812-479-1601
A 5088 55

Dominguez, Jr., Pedro R.
Ofc. 611 Horritt St.
Suite 301
Evonsville, IN, 47710
812-425-9999
Res. 7929 Briorwood Dr.
Evonsville, IN, 47715
812-479-6435
NS 8505 65

Eblen, Kenneth M.
Betty
Ofc. 410 Second St.
Henderson, 42420
502-826-7670
Res. RR 3, Box 182
Henderson, 42420
502-826-9732
FP 1602 48

Gadient, Thomas M.
Ofc. 1413 N. Elm St.
Suite 106
Henderson, 42420
U 1403 76

Hibbs, III, Russell A.
Judith G.
Ofc. P.O. Box 48
Camm. Meth. Hosp.
Henderson, 42420
502-826-6021
Res. 319 12th St.
Henderson, 42420
502-826-7876
EM 1602 59

Hill, Byron W.
Beth
Ofc. Box 1218
Henderson, 42420
502-826-5200
Res. 6400 Dogwood Lone
Henderson, 42420
502-826-4035
SU 5908 67

Howell, Jr., Marshall G.
Borboro B.
Ofc. P.O. Bax 1219
Henderson, 42420
502-827-4000
Res. 100 Myrene Dr.
Henderson, 42420
502-826-6491
OBG 4106 60

Jenkins, John L.
Beverly
Ofc. 736 No. Elm St.
Henderson, 42420
606-826-3624
Res. 760 Morningside Dr.
Henderson, 42420
PD 1602 57

Johnson, Alan H.
Morilyn
Ofc. 1413 N. Elm St.
Henderson, 42420
502-827-3843
Res. 698 Glenwood
Henderson, 42420
502-827-1065
ORS 2204 75

Kennedy, Auddie C.
Tommie
Ofc. 411 Letcher St.
Henderson, 42420
502-827-9803
Res. 2619 Haneysuckle Dr.
Henderson, 42420
502-827-5444
GP 1602 54

Kerns, Jack D.
Morie E.
Ofc. P.O. Box 44
Hendersan, 42420
502-521-7811
OM 1403 75

Kim, Seong Soo
Ok-Jin Jeon
Ofc. 1413 N. Elm St.
Suite 230
Henderson, 42420
502-826-5758
Res. 103 Villo Drive
Hendersan, 42420
502-826-9757
TS 7604 65

Kissinger, Charles C.
Mary
Ofc. Box 1548
Hendersan, 42420
502-826-9595
Res. 5B South Main
Henderson, 42420
502-826-2586
SU 801 38

Korn, Allan M.
Morley S.
Ofc. 801 St. Marys Dr., #302
Evansville, IN, 47715
Res. Methodist Hospital
Henderson, 42420
812-479-7400
IM 2007 70

Liles, Wayne C.
Janet G.
Ofc. 110 3rd St.
Suite 250
Henderson, 42420
502-826-8324
Res. 2160 Locust Dr.
Henderson, 42420
502-826-8324
SU 102 58

Logan, Thomas B.
Jo
Ofc. 800 N. Elm St.
Hendersan, 42420
502-827-2312
Res. 4005 Zion Rd.
Henderson, 42420
502-826-5767
OTO 1612 67

Logan, III, John A.
Jackie
Ofc. 110 Third St.
Henderson, 42420
502-827-5657
Res. RR #6, 3580 Zian Rd.
Henderson, 42420
502-826-8624
FP 4105 61

Maddela, Ricardo B.
Zenoido A.
Ofc. Box 1548
Henderson, 42420
Res. Henderson Clinic
Henderson, 42420
502-826-8480
SU 5088 69

Maddela, Zenaida A.
Ricordo, MD
Ofc. 105 N. Main St.
Cloy, 42404
502-664-2284
Res. 1177 South Moin St.
Henderson, 42420
502-826-8480
IM 8507 70

Marchand, John H.
Agnes M.
Ofc. Rt. 1, 3278 Briarwood
Henderson, 42420
502-826-9115
Res. 3278 Briarwood Dr.
Hendersan, 42420
502-826-9115
R 4105 54

McClellan, Jr., John W.
Judy
Ofc. Atkinson Pork Building
Henderson, 42420
502-826-2300
Res. Woodpoint & Briorwood
Henderson, 42420
502-826-8244
GP 1602 60

Montgomery, Roy W.
Bobbie
Ofc. Box 48
Henderson, 42420
502-826-6021
Res. 2608 Heother Lone
Henderson, 42420
502-826-8734
EM 1602 66

Newman, John S.
Sue
Ofc. 723 N. Moin St.
Henderson, 42420
Res. 723 North Main St.
Henderson, 42420
502-826-4154
GP 4106 32

O'Nan, William W.
Raberta J.
Ofc. 1413 N. Elm St.
Henderson, 42420
502-826-0838
Res. R R #6, Box 304
Henderson, 42420
502-826-1525
OBG 1612 73

Rashidian, John
Sherri
Ofc. 1413 N. Elm St.
Henderson, 42420
502-826-0838
Res. 2507 Knall Tap Lone
Henderson, 42420
502-827-8066
OBG 5088 75

Samuel, Jason T.
Inbarani P.
Ofc. Box 1247
Henderson, 42420
502-826-1266
Res. 820 Mossey Tree Lone
Henderson, 42420
502-826-0124
IM 7023 63

Shaw, Millard R.
Pouline
Ofc. 1208 Toronsoy
Henderson, 42420
502-826-1522
Res. 1208 Toransoy Dr.
Henderson, 42420
IM 4301 44

Siegel, Lyle P.
Shirley
Ofc. P.O. Box 48
Henderson, 42420
Res. 7091 E. Cherry St.
Evansville, IN, 47715
ANES 1720 71

Sierra, Augustin
Ofc. Rt. #1
Rabards, 42452
Res. 235 S. Elm
Rabards, 42452
ORS 6205 56

Sigda, Fred
Rita Patricia
Ofc. 801 St. Mary's Dr.
Evansville, IN, 47715
Res. 1124 Braakshire Drive
Evansville, IN, 47715
812-479-8395
IM 802 56

Silva, Rogelio A.
Susan H.
Ofc. 1305 N. Elm St.
Hendersan, 42420
Res. 855 Marning Side Drive
Henderson, 42420
502-827-0447
P 7902 71

Sprague, III, A. Davis
Barbara
Ofc. Bax 1219
Hendersan, 42420
502-827-4000
Res. 2732 Heather Dr.
Hendersan, 42420
OBG 1612 70

Stearns, James M.
Carla
Ofc. 110 W. Third St.
Hendersan, 42420
Res. RR #1, Bax 229-A
Robards, 42452
OPH 1612 67

Stokes, Atmur H.
Ofc. Rt. 3, Bax 303A
Hendersan, 42420
502-826-6251
Res. Rt. #3 303-A
Hendersan, 42420
FP 5088 74

Veal, Jr., Molly G.
Martha
Ofc. Bax 478
Hendersan, 42420
502-826-1522
Res. 2448 U.S. 60 East
Henderson, 42420
502-827-1364
IM 1602 48

Watkins, David A.
Peggy
Ofc. 2484 US 60 East
Hendersan, 42420
502-826-6229
Res. 2484 U.S. 60 East
Hendersan, 42420
502-826-6229
FP 1602 73

Wham, Richard A.
Dian
Ofc. Rt. 6, Bax 344
Henderson, 42420
502-826-6251
Res. Rt. 6, Bax 344
Hendersan, 42420
R 1211 58

Wilder, T. Paul
Mary Gail
Ofc. 1413 N. Elm, Suite 105
Hendersan, 42420
502-827-8662
Res. 3277 Tanglewaad
Hendersan, 42420
502-826-1150
FP 1602 70

Yusufji, Akhtar E.
Dally K.
Ofc. P.O. Bax 1193
Hendersan, 42420
Res. Deepwaad Dr.
Hendersan, 42420
502-826-7481
U 7006 59

de Soyza, Neil D.B.
Ofc. P.O. Bax 1296
Hendersan, 42420
C 5088 62

HENRY

Houston, Robert L.
Tammie H.
Ofc. Henry County Clinic
Eminence, 40019
502-845-5672
Res. 114 Talle Caurt
Eminence, 40019
502-845-4278
FP 1602 46

Koff, Ronald M.
Julie
Ofc. P.O. Bax 189
New Castle, 40050
502-845-7550
Res. 6503 WaadVail Caurt
Lauisville, 40222
502-228-2980
FP 1602 72

Norvell, Wyatt
Dat
Ofc. 312 So. Main St.
New Castle, 40050
502-845-2864
Res. 616 College
New Castle, 40050
502-845-2879
FP 1602 41

HOPKINS

Ainsworth, Sr., George E.
Eileen
Ofc. 1912 Bayview Dr.
Madisanville, 42431
502-825-7209
Res. 1912 Bayview Drive
Madisanville, 42431
502-821-1421
ORS 802 48

Alexander, Wallace R.
Ja
Ofc. Traver Clinic
Madisanville, 42431
Res. 339 S. Seminary
Madisanville, 42431
IM 4106 54

Arnold, Marion E.
Betty
Ofc. Traver Clinic
Madisanville, 42431
502-825-7200
Res. 955 Skyline Drive
Madisanville, 42431
502-821-5619
FP 1602 51

Asher, Christine A.
Mark Campbell
Ofc. Traver Clinic, Clinic Dr.
Madisonville, 42431
502-825-7200
Res. 1021 Legian Drive
Madisanville, 42431
502-821-6927
FP 1242 81

Babbitt, Ann M.
Ofc. Traver Clinic
Madisanville, 42431
ORS 4806 77

Bachman, Richard K.
Ja Ann
Ofc. Traver Clinic
Madisanville, 42431
Res. Rt. 2, Dadsan Ln.
Madisanville, 42431
502-821-6048
PD 1602 64

Beck, James L.
Betty
Ofc. Traver Clinic
Madisanville, 42431
502-825-7200
Res. Rt. #6, 1714 Lanark Dr.
Madisanville, 42431
502-821-2352
R 1602 60

Bowles, James M.
Beverly
Ofc. Traver Clinic
Madisanville, 42431
502-825-7200
Res. 1035 Parkwaad Drive
Madisonville, 42431
502-825-4240
FP 1602 76

Brewer, John R.
Edith Bradley
Ofc. Traver Clinic
Madisanville, 42431
Res. 1965 Lanark Dr.
Madisanville, 42431
502-825-4015
PD 3701 63

Brown, Eric
Ofc. Traver Clinic
Madisanville, 42431
Res. 1102 Eastside Lane
Apt. 5
Madisanville, 42431

Buchanan, Bernard J.
Ofc. Traver Clinic
Madisanville, 42431
502-825-7200
Res. 1014 Sunrise Place
Madisanville, 42431
502-821-2420
IM 1243 76

Campbell, Mark R.
Christine Asher
Ofc. Traver Clinic, Clinic Dr.
Madisanville, 42431
502-825-7200
Res. 1021 Legian Drive
502-821-6927
FP 1242 81

Casey, John P.
Helen M.
Ofc. Traver Clinic, Clinic Dr.
Madisanville, 42431
502-825-7200
Res. 1102 Eastside Lane
Apt. 8
Madisanville, 42431
502-821-8193
FP 1602 81

Castle, Eugene A.
Lau
Ofc. Traver Clinic
Madisanville, 42431
Res. 1043 McPhersan Dr.
Madisonville, 42431
502-821-3364
OBG 3501 53

Chaney, Herbert
Virginia
Ofc. 317 Sa. Main St.
Dawsan Springs, 42408
502-797-3521
Res. Rasadale Lane
Dawsan Springs, 42408
502-797-4561
FP 1602 56

Chilukuri, Mohan
Vani R.
Ofc. Traver Clinic
Madisanville, 42431
502-825-7200
Res. Traver Clinic
Madisanville, 42431
502-825-8278
FP

Clapp, William H.
Ofc. Trover Clinic
Madisonville, 42431
FP 1612 75

Clark, Gerald
Miriam
Ofc. Trover Clinic
Madisanville, 42431
502-825-7451
Res. Lake Pine Knall
Raute 7
Madisanville, 42431
502-821-7588
OPH 1320 65

Clarke, James A.
Sylvia
Ofc. Trover Clinic
Madisonville, 42431
502-825-7434
Res. 1813 Jennings Dr.
Madisanville, 42431
502-821-8145
C 3712 54

HOPKINS

Cloar, Robert B.
Barboro J.
Ofc. Trover Clinic
Modisonville, 42431
502-825-7436
Res. 2015 Morty Drive
Modisonville, 42431
502-821-4038
FP 1701 63

Coffman, Selby E.
Polly
Ofc. Trover Clinic
Modisonville, 42431
Res. 2135 N. Moin St.
Modisonville, 42431
R 1602 50

Compton, David Alan
Ofc. Trover Clinic
Modisonville, 42431
Res. 1614 Continental Drive
Madisonville, 42431
FP 1612 80

Corpus, R. P.
Ofc. Trover Clinic
Modisonville, 42431
Res. Rt. 1, Box 202-A2
Honson, 42413
PATH 8507 69

Dave, Udaykant V.
Aroono
Ofc. Trover Clinic
Modisonville, 42431
Res. 807 Shomrock Dr.
Modisonville, 42431
OTO 7001 60

Davis, Gary Wade
Ofc. Trover Clinic
Modisonville, 42431
FP 1602 80

De Bandi, Harry O.
Sondy
Ofc. Trover Clinic
Modisonville, 42431
502-825-7392
Res. 1728 Jennings Dr.
Modisonville, 42431
U 4106 61

Denison, Vinna Rhea
Ofc. Trover Clinic
Modisonville, 42431
502-825-7200
Res. 70 West Broodwoy
Cove City, 42127
502-773-3376
FP 1602 80

Dewey, Dennis D.
Joyce A.
Ofc. Trover Clinic
Modisonville, 42431
502-825-7356
Res. 4035 College Drive
Modisonville, 42431
502-825-4020
N 3103 78

Dodds, Charles R.
Beryl
Ofc. Trover Clinic
Eorlington, 42410
Res. 2625 Club Ct.
Modisonville, 42431
FP 4106 71

Dodson, George E.
Betty J.
Ofc. Rt. 2 Dodson Ln.
Box 1185
Modisonville, 42431
502-821-4804
Res. Rt. 2, Dodson Lone
Modisonville, 42431
502-821-4804
OBG 3713 53

Donley, James M.
Judith
Ofc. Trover Clinic
Modisonville, 42431
Res. 5002 Logo Dr.
Modisonville, 42431
ORS 2434 69

Drake, Jr., Robert G.
Vicki
Ofc. 236 Hillcrest Ave.
Modisonville, 42431
502-825-7200
Res. 236 Hillcrest Ave.
Madisonville, 42431
502-821-7979
FP 1612 81

Emslie, Robert J.
Ofc. Trover Clinic
Modisonville, 42431
502-825-7200
Res. 2042 Lokeview Drive
Madisonville, 42431
502-821-5471
GE 3207 75

Fisher, Charles R.
Violet
Ofc. Trover Clinic
Madisonville, 42431
Res. 1035 McPherson
Modisonville, 42431
FP 1602 53

Freeman, James A.
Elizobeth
Ofc. 317 So. Moin
Dawson Springs, 42408
Res. Rt. 3, Box 554
Dowson Springs, 42408
FP 1901 40

Fulton, Robert L.
Abi V.S.
Ofc. Trover Clinic
Modisonville, 42431
502-825-7200
Res. Rt. 1, Box 156 B
Hamson, 42413
502-322-8874
C 2402 64

Gaines, Scott
Suzon
Ofc. 210 Ookwood
Eorlington, 42410
Res. 210 Ookwood
Eorlington, 42410
FP 1612 80

Gallo, Thomas A.
Ofc. Trover Clinic
Modisonville, 42431
502-825-7380
Res. 4020 Buffolo Troce
Madisonville, 42431
502-821-7937
PUD 3441 67

Gibson, William L.
Ofc. Trover Clinic
Modisonville, 42431
Res. 2081 Huckshold
Modisonville, 42431
FP 5088 80

Hamman, Jack L.
Beverly
Ofc. Trover Clinic
Madisonville, 42431
502-825-7200
Res. 2337 St. Malo
Modisonville, 42431
502-825-3277
TS 4106 57

Hatfield, Danny R.
Stephanie R.
Ofc. Trover Clinic
Modisonville, 42431
502-825-7371
Res. 350 Buckner Ridge Lone
Madisonville, 42431
502-821-3261
R 1612 75

Hatfield, Stephanie R.
Don
Ofc. Trover Clinic
Madisonville, 42431
502-825-7200
Res. 350 Buckner Ridge Lone
Modisonville, 42431
502-821-3261
PATH

Haywood, Kenneth P.
Ofc. Rt. 1, Box 86
Nortonville, 42442
502-667-2051
Res. Rt. 1, Box 86
Nortonville, 42442
502-676-3437
FP 1602 56

Hearne, Michael J.
Kothleen
Ofc. Trover Clinic
Madisonville, 42431
502-825-7357
Res. Route 1
Providence, 42450
502-667-5766
C 802 70

Heine, Karl E.
Judy
Ofc. 5010 Logo Dr.
Modisonville, 42431
Res. 5010 Logo Dr.
Modisonville, 42431
D 1243 72

Herrmann, Thomas L.
Peggy
Ofc. Trover Clinic
Madisonville, 42431
502-825-7356
Res. 116 Genevieve Dr.
Modisonville, 42431
502-821-7017
P 1245 76

Hines, Ralph C.
Jeanne
Ofc. Trover Clinic
Modisonville, 42431
502-825-7200
Res. Rt. 6, 1986 Morty Dr.
Madisonville, 42431
502-825-2700
IM 3713 64

Hines, Cynthia R.
Williom R.
Ofc. Trover Clinic
Modisonville, 42431
502-825-7380
Res. 862 Arrowheod Dr.
Madisonville, 42431
502-825-0858
IM 4106 72

Hoffman, Robert L.
Dottie
Ofc. Trover Clinic
Modisonville, 42431
Res. 1916 Lokeview Dr.
Modisonville, 42431
PD 3441 48

Jernigan, William R.
Billie
Ofc. Trover Clinic
Modisonville, 42431
502-825-7200
Res. Forefor
Modisonville, 42431
502-821-1501
SU 4106 55

Johnson, Alan G.
Elizabeth
Ofc. Trover Clinic
Modisonville, 42431
Res. 1988 Morty Drive
Madisonville, 42431
P 2402 56

Johnson, James L.
Anne
Ofc. Trover Clinic
Madisonville, 42431
502-825-7357
Res. Rt. 1, Hwy. 281
Hanson, 42413
C 1602 75

Kawas, Elias E.
Jeonnette
Ofc. Trover Clinic
Modisonville, 42431
502-825-7200
Res. Shomrock Dr.
Madisonville, 42431
502-821-7651
PATH 3119 53

HOPKINS

Kirk, Cary T.
Kathryn A.
Ofc. Trover Clinic
Madisanville, 42431
Res. 2804 Country Club Dr.
Madisonville, 42431
502-821-8778
OBG 1602 77

Klompus, William H.
Joon
Ofc. Trover Clinic
Modisonville, 42431
502-825-7392
Res. 1018 McPherson Dr.
Modisanville, 42431
502-821-5764
U 3109 59

Lambert, James H.
Mory
Ofc. Trover Clinic
Modisonville, 42431
502-825-7428
Res. Rt. 5, Box 78F
Princeton, 42445
502-365-6176
FP 1211 50

Larsen, Ferris I.
Evelyn
Ofc. P.O. Box 148
Morgonfield, 42437
Res. Route 5, Box 148
Morgonfield, 42437
FP 2107 57

Leigh, Lynn W.
Jonet
Ofc. Trover Clinic
Madisonville, 42431
502-383-2521
Res. 818 Sunset
Madisonville, 42431
502-825-3978
FP 4507 76

Lessenberry, Hugh B.A.
Ofc. 3000 St. Chorles Ave. #102
New Orleons, LA, 70115
502-899-1190
Res. 913 South Green Street
Glosgow, 42141
502-651-3117
ORS 1602 81

Lineberry, Tristan K.
Ofc. Trover Clinic
Madisonville, 42431
Res. 619 Dozier Avenue
Madisonville, 42431
FP 1602 80

Lolley, David M.
Bonnie
Ofc. Traver Clinic
Madisanville, 42431
502-825-7200
Res. 2310 Simmentol Dr.
Madisanville, 42431
502-825-3635
TS 1701 68

Love, Jon R.
Noncy
Ofc. Trover Clinic
Madisonville, 42431
502-825-7209
Res. 226 S. Scott
Madisonville, 42431
502-825-1064
ORS 3712 56

Lowe, Virgil W.
Lou
Ofc. Trover Clinic
Modisonville, 42431
Res. Rt. 6, Pennyrile Dr.
Madisonville, 42431
502-821-8523
PD 1005 61

Mahr, Merle M.
Glemo
Ofc. Trover Clinic
Madisonville, 42431
Res. Farefar Lone
Madisonville, 42431
SU 3120 45

Marshall, M. Ernest
Ofc. Trover Clinic
Modisonville, 42431
Res. 778 Wilson Dr.
Madisonville, 42431
IM 4501 75

Martin, Dan A.
Glodys
Ofc. Trover Clinic
Modisonville, 42431
502-825-7273
Res. 144 Woodlawn Dr.
Modisonville, 42431
502-821-6245
PH 2001 52

Milburn, Joseph L.
Loura
Ofc. Traver Clinic
Madisanville, 42431
502-825-7325
Res. 1910 Lokeshore Dr.
Modisonville, 42431
502-821-5415
SU 4106 58

Miller, Harold M.
Ruth C.
Ofc. Hopkins Co. Hosp.
Modisonville, 42431
502-825-5105
Res. N. Pennyrile Drive
Madisonville, 42431
502-825-2951
EM 415 72

Miller, Frank B.
Ofc. 904 North Vernon,
IN, 47265
502-825-7441
Res. 275-A McCoy Dr.
Madisonville, 42431
502-821-1774
SU 69

Nang, N. Thomas
Ofc. Trover Clinic
Madisanville, 42431
Res. Trover Clinic
Madisanville, 42431

Nell, James E.
Lindo Graybeal
Ofc. Trover Clinic
Modisonville, 42431
502-825-7200
Res. Route 2
Madisonville, 42431
502-249-3703
FP 1612 80

Nickel, Susan P.
Ofc. Trover Clinic
Modisonville, 42431
Res. 3085 Deep Creek Dr.
Modisonville, 42431
PD 3440 80

Nickel, Allan E.
Suson P.
Ofc. Trover Clinic
Modisanville, 42431
502-825-7405
Res. 3085 Deep Creek Dr.
Madisanville, 42431
502-825-0817
IM 3440 75

Parrish, Charles W.
Ofc. Trover Clinic
Modisonville, 42431
502-825-5100
Res. 110 South Scott
Madisonville, 42431
502-825-4005
EM 1612 79

Pate, John W.
Morionno
Ofc. Trover Clinic
Modisonville, 42431
Res. 2701 South Moin
Modisanville, 42431
502-821-4556
OPH 301 52

Pokorny, Vaclav I.
Yvonne
Ofc. Trover Clinic
Madisonville, 42431
502-825-7371
Res. 2380 Ridgewoad Drive
Modisonville, 42431
R 5088 57

Rayner, Abigail V.
Rabert Fultan
Ofc. Trover Clinic
Modisanville, 42431
502-825-7200
Res. Rt. 1, Bax 156 B
Hansan, 42413
502-322-8874
FP 903 77

Reader, G. Scott
Diane R.
Ofc. Trover Clinic
Madisonville, 42431
502-825-7200
Res. R.R. 1, Box 202 H
Honson, 42413
502-322-8793
C 3106 73

Roe, Joseph E.
Mory Helen
Ofc. Trover Clinic
Modisonville, 42431
502-825-7200
Res. 1995 Brett Dr.
Madisonville, 42431
502-821-4064
SU 4106 62

Salmon, James L.
Ruth
Ofc. 412 N. Kentucky Ave.
Modisonville, 42431
502-821-3368
Res. 208 N. Main
Madisonville, 42431
502-821-3150
GP 4105 32

Scott, Frederick A.
Jone
Ofc. 634 Echo Ln.
Modisanville, 42431
Res. 634 Echo Ln.
Modisonville, 42431
502-821-4404
ANES 1602 38

Shah, Manojkumar
Hanso
Ofc. Trover Clinic
Modisonville, 42431
Shoh
Res. 5020 Laga Drive
Modisonville, 42431
502-821-3432
OBG 7024 71

Sheth, Mohitkumar K.
Kokila
Ofc. Trover Clinic
Modisonville, 42431
Res. 1527 Lomond Dr.
Modisanville, 42431
502-821-2580
C 7013 71

Shoff, Dennis G.
Kothleen
Ofc. Trover Clinic
Madisonville, 42431
502-825-7361
Res. 2364 St. Molo
Madisanville, 42431
OBG 1701 76

Shuler, Archibald F.
Mildred F.
Ofc. Trover Clinic ENT Dept.
Madisanville, 42431
502-825-7200
Res. Greenville Pike
Rt. 3, Box 3A
Modisanville, 42431
502-821-2273
OTO 1005 61

Steinfeld, Carroll M.
Deloris
Ofc. Trover Clinic
Modisonville, 42431
502-825-7230
Res. 5006 Logo Dr.
Madisanville, 42431
502-821-0311
GE 1602 63

Stryker, Allan K.
Ofc. Trover Clinic
Modisonville, 42431
502-825-7325
Res. 3465 Chur Dr.
Madisonville, 42431
502-821-2805
PS 1602 72

Stufflebam, Bradley C.
Jane W.
Ofc. Traver Clinic
Madisonville, 42431
502-825-7371
Res. Rt. 1, Box 202-C
Honson, 42413
502-322-8548
R 2403 75

Sugar, Darryl M.
Ofc. Trover Clinic
Modisonville, 42431
IM

Taylor, Paul M.
Mortha
Ofc. Trover Clinic
Modisonville, 42431
Res. 2648 Club Ct.
Modisonville, 42431
502-821-8012
FP 1602 59

Taylor, Frank H.
Pom
Ofc. Trover Clinic
Madisonville, 42431
PUD

Trover, Loman C.
Helen
Ofc. Trover Clinic
Modisonville, 42431
502-825-7417
Res. 409 W. Moin
Eorlington, 42410
502-383-5135
ADM 1602 47

Trover, Philip Loman C.
Ofc. Traver Clinic
Madisonville, 42431
Res. 2542 Country Club Lone
Modisonville, 42431
R 1612 76

Trover, Jr., Faull S.
Ofc. Trover Clinic
Madisonville, 42431
Res. Traver Clinic
Modisonville, 42431
GP 1602 78

Trover, Sr., Faull S.
Betty
Ofc. Trover Clinic, Clinic Dr.
Madisonville, 42431
502-825-6778
Res. Eorlwood Drive
Modisonville, 42431
502-821-6778
PD 1602 49

Van Hooser, Curtis W.
Princess
Ofc. Trover Clinic
Modisonville, 42431
Res. 350 N. Moin
Modisonville, 42431
IM 4106 62

VonTobel, Harry P.M.
Dorlene M.
Ofc. Trover Clinic
Modisonville, 42431
502-825-7200
Res. 2315 Simmentol Drive
Madisonville, 42431
502-821-8629
PD 1320 70

Wallace, David W.
Regino
Ofc. Trover Clinic
Modisonville, 42431
Res. 666 Choctow
Madisonville, 42431
502-821-8513
FP 1602 81

Wee, Gilberto O.
Morgoret
Ofc. Trover Clinic
Modisanville, 42431
502-825-5116
Res. 2365 Simmentol Drive
Modisonville, 42431
502-825-2055
ANES 8507 63

Wiles, Carroll L.
Sheilo
Ofc. Trover Clinic
Modisonville, 42431
502-825-7200
Res. 773 W. Broodwoy
Madisanville, 42431
502-821-0560
OPH 1612 79

Wilson, Eric C.
Ofc. 1100 Bocon Blvd.
Modisonville, 42431
PATH 1320 68

Wolfe, Randy L.
Corol
Ofc. Trover Clinic
Modisonville, 42431
Res. 105 Mitchell, Route 6
Modisonville, 42431
IM 1320 73

Zwemer, Jr., Rodger J.
Lee Ann
Ofc. Trover Clinic
Madisonville, 42431
502-825-7209
Res. 218 Valley Dr.
Modisanville, 42431
502-821-0278
ORS 1602 76

HARDIN

Abang, Raul S.
Aurora
Ofc. 597 Rue Lo Grande
Elizobethtown, 42701
502-737-4600
Res. 597 Rue La Gronde
Elizabethtown, 42701
502-769-5761
ANES 5088 63

Armstrong, Paul S.
Ellen
Ofc. 914 No. Dixie
Elizobethtown, 42701
502-769-5963
Res. Rt. 4, Forest Springs
Elizobethtown, 42701
502-737-3402
OBG 1612 72

Asuncion, Juan S.
Margoret
Ofc. 910 N. Dixie
Governors Manor
Elizobethtown, 42701
502-737-4600
Res. 619 Eldorado Dr.
Elizabethtown, 42701
502-765-4021
ANES 5088 58

Avenido, Antero J.
Antonieto A.
Ofc. Hordin Memorial Hosp.
Elizobethtown, 42701
502-737-4600
Res. Corey Ln., Cordinol Creek
Elizobethtown, 42701
502-737-1520
ANES 8506 64

Bates, John C.
Ofc. 724 Sunrise Ln.
Elizobethtown, 42701
FP 1602 52

Bauer, George W.
Rene C.
Ofc. 1115 Woodlond Dr.
Elizobethtown, 42701
502-769-5963
Res. Timberline Estates
Elizobethtown, 42701
502-737-3337
OBG 1612 72

Bean, J. S.
Ofc. 202 Poplor Dr.
Elizobethtown, 42701
GP 04

Bland, Vivian H.
John Williom
Ofc. 914 No. Dixie
Elizobethtown, 42701
502-769-6377
Res. Route 3, Box 131 B
Elizabethtown, 42701
502-737-1465
IM 1612 73

Brassfield, Clyde M.
Dulcie
Ofc. 205 Medical Arts Bldg.
Elizobethtown, 42701
502-765-4361
Res. RFD 6, 806 Sunrise Lane
Elizobethtawn, 42701
502-765-6322
FP 1602 52

Brassine, William F.
Corol R.
Ofc. 1201 Woodlond Dr.
Elizabethtown, 42701
502-769-5971
Res. 625 Eldorado Dr.
Elizobethtawn, 42701
502-769-5842
OBG 4701 63

Carney, William M.
Susie
Ofc. Hardin Memoriol Hosp., Lob
Elizabethtown, 42701
502-737-1212
Res. 104 Lokeview Dr.
Elizobethtown, 42701
502-769-5635
PATH 1602 66

Caso, William D.
Beverly
Ofc. 1010 Woodland Dr.
Elizobethtown, 42701
502-769-2805
Res. 807 Brittony
Elizobethtown, 42701
502-765-6410
P 3119 58

Chaplin, Mark S.
Ofc. 906 Woodlond Dr. #209
Elizabethtown, 42701
502-765-6109
PD 4105 75

Colvin, David S.
Ofc. 800 W. Lincoln Tr.
Blv. 102
Rodcliff, 40160
502-351-3515
Res. 952 Sunset Drive
Rodcliff, 40160
502-351-3270
GP 1602 56

Dew, Joseph M.
Betty
Ofc. 405 S. Mill St.
Vine Grove, 40175
502-624-9148
Res. 405 S. Mill Street
Vine Grove, 40175
502-877-0240
FP 1602 62

Ferriell, Jr., Thomas J.
Thelmo H.
Ofc. 1002 Woodland Dr.
Elizobethtown, 42701
502-769-1381
Res. 701 Sunrise Lone
Elizobethtown, 42701
502-765-6044
FP 1602 51

Gerard, III, Paul E.
Jackie
Ofc. Helmwood Medicol Ctr.
Elizabethtawn, 42701
502-769-5579
Res. 709 Sunrise Lane
Elizabethtown, 42701
502-765-4050
FP 1602 74

HARDIN

Godfrey, William J.
Ofc. 914 No. Dixie
Elizabethtown, 42701
Res. Route 6, Box 234
Elizobethtown, 42701
IM 1602 66

Greenwell, Bernard D.
Frances G.
Ofc. 222 W. Dixie
Elizobethtown, 42701
502-769-1219
Res. 596 Wolnut Hill Rd.
Elizabethtown, 42701
502-765-4255
FP 1602 62

Hall, Wreno M.
Thelmo
Ofc. P.O. Box 38
Elizobethtown, 42701
502-765-6164
Res. 214 Cherokee Road
Elizabethtown, 42701
502-765-6438
SU 1602 50

Hall, Amos
Ofc. 912 Woodland Dr.
Elizobethtown, 42701
502-749-2616
Res. Druid Hoven
Rineyville, 40162
SU 1602 68

Hand, Edward K.
Dorothy F.
Ofc. 110 W. Moin St.
Vine Grove, 40175
502-877-2118
Res. 1777 West Vine Street
Vine Grove, 40175
502-877-2102
GP 1602 47

Handley, William R.
Marjorie
Ofc. 914 N. Dixie Ave.
Elizobethtown, 42701
502-769-6377
Res. 717 Sunrise Ln.
Elizabethtown, 42701
502-769-1466
IM 1602 60

Iqbal, Mohammad J.
Robino
Ofc. 914 No. Dixie Ave.
Helmwood
Elizobethtown, 42701
502-769-3631
Res. 309 Pinecrest Drive
Elizobethtown, 42701
502-765-7855
U 8305 67

Johnson, Marshall R.
Jerry S.
Ofc. 914 N. Dixie Hwy.
Elizobethtown, 42701
Res. Pear Orchord Rd.
Elizabethtown, 42701
SU 1612 67

Kidd, Astra V.
Ofc. 2 Woodlond Dr.
Wood. Clinic
Elizabethtown, 42701
502-765-4147
Res. 235 W. Poplor, Apt. 8
Elizobethtown, 42701
502-765-4200
FP 1602 62

Kirzinger, Stephen S.
Denise C.
Ofc. Irelond Army Comm. Hosp.
Ft. Knox, 40121
502-624-9960
Res. 192 North Lorroine
Rodcliff, 40160
502-351-7304
N 1602 77

Langley, Jr., Leslie W.
Lou
Ofc. 1010 Woodlond Dr.
Elizobethtown, 42701
502-769-1314
Res. 110 Helmwood Dr.
Elizobethtown, 42701
502-765-7664
PD 1602 53

Lewis, David T.
Patricio A.
Ofc. 912 Woodlond Dr.
Elizobethtown, 42701
502-765-4147
Res. Rt. 1
Elizabethtown, 42701
502-736-6462
FP 1602 58

Litzenberger, Willard A.
Connie
Ofc. 1010 Woodlond Dr.
Elizobethtown, 42701
502-769-1371
Res. 302 Pinecrest
Elizabethtown, 42701
502-765-4872
IM 2001 44

Malik, Mumtaz I.
Elizobeth
Ofc. Helmwood Med. Ct.
914 N. Dixie
Elizobethtown, 42701
502-769-5551
Res. Upper Colesburg Rood
Elizobethtown, 42701
502-769-3520
ORS 5088 70

Mays, Terrell D.
Gail
Ofc. 914 N. Dixie
Elizobethtown, 42701
502-765-6141
Res. Box 146-B, Route 3
Elizobethtown, 42701
502-737-6186
OBG 1602 63

Monsivais, Jose J.
Ofc. Irelond Army Hosp.
Ft. Knox, 40121
502-624-9468
Res. 263 F. Metts Ct.
Elizabethtown, 42701
502-769-6699
SU 5088 71

Moossun, M. Hassen
Dorothy Louise
Ofc. 1010 Woodlond Dr.
Med. Arts
Elizobethtown, 42701
502-769-6323
Res. Route 8, Box 238
Elizobethtown, 42701
502-351-4723
IM 6701 57

Moreman, II, Lucian Yann
Phyllis
Ofc. 1115 Woodland Dr.
Elizobethtown, 42701
502-769-5963
Res. Rt. 4, Derrick Ave.
Elizabethtown, 42701
OBG 1612 72

Myers, Robert K.
Audrey
Ofc. Hordin Mem. Hosp.
Elizobethtown, 42701
502-765-4144
Res. 249 Pear Orchord Rd.
Elizabethtown, 42701
R 4805 69

Padgett, Robert A.
Peggy V.
Ofc. 1901 So. Cedor
Suite 102
Tocomo, WA, 98405
206-383-1589
Res. 1038 Berkeley
Fircrest, WA, 98466
206-565-1676
PD 1602 64

Patel, Mahendra
Smita
Ofc. 912 Woodlond Dr.
Elizabethtown, 42701
502-765-5112
Res. 21 Cothy Street
Elizobethtown, 42701
502-769-3136
IM 5088 71

Patel, Sharad C.
Kalpno
Ofc. 2407 W. Louisiono
Suite 103
Midland, TX, 79701
502-769-1304
Res. 101 Lokeview Drive
Elizobethtown, 42701
502-737-5754
P 5088 73

Pike, Samuel P.
Joyce A.
Ofc. Helmwood Med. Ctr.
Elizobethtown, 42701
502-765-6242
Res. Box 154-D
Wolnut Creek Rood
Elizobethtown, 42701
502-765-6246
FP 1602 77

Rainey, Fred C.
Suson
Ofc. 912 Woodlond Dr.
Elizobethtown, 42701
502-765-4147
Res. 807 Sunrise Lone
Elizobethtown, 42701
502-765-6523
FP 4106 55

Richard, Henri-Claude
Ofc. 1548 Redbud Circle
Radcliff, 40160
502-351-4342
R 803 72

Richardson, Otis M.
Mory E.
Ofc. 914 No. Dixie
Elizobethtown, 42701
502-765-6167
Res. Rt. #7, Box 77C
Elizobethtown, 42701
502-765-6250
R 1602 46

Robbins, Robert E.
Rito H.
Ofc. P.O. Box 2089
Elizobethtown, 42701
502-769-5551
Res. P.O. Box 2089
Elizobethtown, 42701
502-765-7339
SU 3441 58

Routt, Ruel T.
Madeline B.
Ofc. Sonora, 42776
502-369-7108
Res. Box 82
Sonoro, 41776
502-369-7109
GP 1602 37

Sami, Abdel W.
Lindo
Ofc. Hordin Memoriol - PATH
Elizobethtown, 42701
502-737-1212
Res. 309 Edgewood Avenue
Elizobethtown, 42701
502-769-3264
PATH 6805 61

Shah, Navinchandra R.
Renuko N.
Ofc. 907 North Dixie
Elizobethtown, 42701
502-769-1304
Res. Rt. 2, Four Seosons
Elizobethtown, 42701
P 5088 75

Sharman, Edward J.
Froncis W.
Ofc. P.O. Box 130
Elizobethtown, 42701
Res. P.O. Box 130
Elizabethtown, 42701
502-737-5627
SU 4501 37

Songster, Curtis L.
Ofc. 701 6th St. So.
St. Petersburg, FL, 33701
813-822-2998
Res. 701 6th St., South
St. Petersburg, FL, 33701
GP 1701 59

Stuteville, James H.
Ofc. P.O. Box 710
Elizabethtawn, 42701
502-369-8815
Res. Rt. 1, Box 158
Sanara, 42776
502-369-8815
PH 1602 51

Taylor, Thomas R.
Ginny
Ofc. 914 Na. Dixie
Elizabethtawn, 42701
502-769-5551
Res. Rt. 1
Twin Rivers Farm
Bastan, 40107
502-769-3689
SU 1005 60

Vaught, Stephen K.
Judy
Ofc. 914 Na. Dixie
Elizabethtawn, 42701
502-769-3347
Res. 1026 Shawnee Dr.
Elizabethtown, 42701
502-765-7682
U 1612 71

Wright, John
AnneRae
Ofc. 914 W. Dixie
Elizabethtawn, 42701
502-769-5501
Res. Bax 239
Upper Lake Road
Elizabethtown, 42701
OPH 1705 62

HARLAN

Ahmad, Fazal H.
Talaat
Ofc. Appalachian Regianal Hasp.
Harlan, 40831
606-573-4520
Res. Waadland Hill
Harlan, 40831
606-573-1866
SU 8301 71

Alford, Earl C.
Ofc. Daniel Boone Clinic
Harlan, 40831
SU 3901 59

Arrowood, Julia G.
ANES 2005 33

Ayub, Asif
Nazli
Ofc. Daniel Baane Clinic
Harlan, 40831
Res. Brawning Acres, Bax 17
Harlan, 40831
606-573-6950
IM 8302 70

Bechtold, William
Ofc. Daniel Baane Clinic
Harlan, 40831
2434 70

Begley, Philip J.
Linda
Ofc. Daniel Baone Clinic, 107
Harlan, 40831
606-573-4520
FP 4105 39

Bowers, William E.
Linda L.
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-4520
Res. Ivy Hill
Harlan, 40831
606-573-3963
SU 3501 55

Bryson, Jerry M.
Pat
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-4520
Res. Ivy Hill, Bax 101
Harlan, 40831
606-573-6086
OPH 4106 62

Cooke, Samuel L.
Eva
Ofc. 917 W. Murray Ave.
Durham, NC, 27704
Res. 917 West Murray Avenue
Durham, NC, 27704
919-471-4263
ENT 4504 29

Cope, Jack W.
Ofc. Lynch Medical Service
Lynch, 40855
606-848-5600
Res. Rt. 160
Lynch, 40855
606-848-2364
GP 1612 74

Crisologo, Loreto L.
Darathy E.
Ofc. 201 Cherry St.
Harlan, 40831
606-573-1400
Res. 201 Cherry Street
Harlan, 40831
606-573-6748
EM 8507 50

Dahhan, Abdulkader
Ofc. Daniel Baane Clinic
Harlan, 40831
PUD 9101 64

Dawoud, Samir
Salma
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-4520
Res. 119 Waadland Hill
Harlan, 40831
606-573-2939
ORS 6502 60

Eubank, Rachel R.
William Burger
Ofc. Daniel Baane Clinic
Harlan, 40831
FP 1612 66

Goodin, Thomas L.
Ofc. Daniel Boone Clinic
Harlan, 40831
OBG 803 78

Green, Murphy H.
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-4520
Res. Timbercrest - Bax 12
Harlan, 40831
606-573-5351
U 4105 63

Guindi, Samir A.
Ofc. Daniel Baane Clinic
Harlan, 40831
ENT 5088 64

Hodel, Paul E.
Barbara A.
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-1400
Res. Rt. 1, Bax 432
Baxter, 40806
606-573-6742
ANES 1206 61

Hollins, Gordon
Jaanne
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-4520
Res. N. Main St.
Harlan, 40831
606-573-5025
PD 4105 59

Howard, Robert S.
Darathy
Ofc. P.O. Drawer D.
Harlan, 40831
606-573-4400
Res. Draver Dr.
Harlan, 40831
606-573-4589
SU 1602 34

Hurlocker, James K.
Patricia
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-4520
Res. Ivy Hill
Harlan, 40831
606-573-4597
OBG 4106 56

Jones, Wilfred F.
Ofc. Daniel Baane Clinic
Harlan, 40831
Res. Daniel Baane Clinic
Harlan, 40831
606-573-2367
IM 2001 51

Lee, Yung Poe
Byaund Lee
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-4520
Res. Waadland Hills, Bax 118
Harlan, 40831
606-573-4020
OBG 5088 67

Leger, Anthony F.
Ofc. Daniel Baane Clinic
Harlan, 40831
IM 5088 53

Miller, John D.
Evelyn
Ofc. Claver Fark Clinic
Evarts, 40828
606-837-2100
Res. Claverfark Clinic
Evarts, 40828
606-837-8264
IM 1403 70

Nelson, G. Dudley
Ofc. The Daniel Baane Clinic
Harlan, 40831
PH 3103 44

Nunez, Albino G.
Dawn
Ofc. Daniel Baane Clinic
Harlan, 40831
Res. Waadland Hills
Harlan, 40831
606-573-6191
GP 8506 58

Pack, Rick
Alana
Ofc. Cumberland Valley Clinic
Lynch, 40855
Res. Cumberland Care Center
Lynch, 40855
606-848-2393
FP 1612 78

Pruitt, Thomas D.
Ofc. Daniel Baane Clinic
Harlan, 40831
OPH 1701 54

Reyes, Prudencio Y.
Milagras P.
Ofc. Appalachian Reg. Hasp.
Harlan, 40831
Res. Daniel Baane Clinic
Harlan, 40831
606-573-7311
EM 8507 54

Salter, John J.
Ofc. Appalachian Reg. Hasp.
Harlan, 40831
PATH 2434 39

Saxena, Suresh C.
Santash
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-4520
Res. Airpart Raad
Baxter, 40806
606-573-3156
PD 7008 63

Schosser, Milo H.
Ruth
Ofc. Lynch Medical Service
Lynch, 40855
606-848-5451
Res. Benham, 40807
606-848-2656
GP 1211 40

Simmons, Truman D.
Edna
Ofc. Harlan Appalachian Reg. Hasp.
Harlan, 40831
Res. Harlan ARH
Harlan, 40831
R 1705 52

Stepchuck, Walter H.
Catherine
Ofc. P.O. Bax 3194
Mantgamery, AL, 36109
205-277-2919
Res. Harlan ARCH
Harlan, 40831
205-277-2919
GP 1602 40

Stoltzfus, Richard G.
Elaine
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-4520
Res. Daniel Baane Clinic
Harlan, 40831
606-837-8264
IM 3709 66

Vieillard, Louis F.
Marla
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-4520
Res. Daniel Baane Clinic
Harlan, 40831
606-573-4085
ANES 3106 46

Wells, Paul O.
Myrtle
Ofc. Appalachian Reg. Hasp.
Harlan, 40831
606-573-1400
Res. Ivy Hill
Harlan, 40831
606-573-3396
R 502 34

Wier, Kenneth R.
Emily
Ofc. Lynch Medical Services
Lynch, 40855
606-848-5451
Res. 543 Jahnsan Raad
Lynch, 40855
606-848-2240
GP 4106 64

Willard, John H.
Ofc. 311 Nautilus Shell Pt. Village
Ft. Myers, FL 33908
IM 3701 27

Wilson, Loyal K.
Virginia L.
Ofc. Rt. 5, Bax 486
Tyler, TX, 75706
Res. Rt. 5, Bax 486
Tyler, Texas, 75706
214-882-4954
ORS 3712 39

Yaqub, Mohammad
Farida
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-4520
Res. P.O. Bax 54
Brawning Acres
Harlan, 40831
606-573-6468
D 8302 65

Zurlo, Philip J.
Ofc. Daniel Baane Clinic
Harlan, 40831
606-573-4520
Res. Bax 435 Airpart Raad
Baxter, 40806
U 3109 59

HARRISON

Allen, James R.
Jane A.
Ofc. 203 Sauth Church St.
Cynthiana, 41031
606-234-6060
SU 4106 72

Arnold, Richard W.
Carale A.
Ofc. 300 E. Pleasant St.
Cynthiana, 41031
606-234-4833
Res. Raute #6, Bax 274A
Cynthiana, 41031
606-234-6191
FP 1612 75

Castillo, Julian V.
Edith
Ofc. Sa. Church St.
Cynthiana, 41031
606-234-3314
Res. 112 Culpepper Drive
Cynthiana, 41031
606-234-6347
SU 8506 63

Cooper, John G.
Debarah A.
Ofc. Rt. 3, Oddville Pk.
Grandview Drive
Cynthiana, 41031
606-234-6000
Res. 405 East Bridge Street
Cynthiana, 41031
FP 1602 78

Fredrick, George T.
Mary Ann
Ofc. Harrisan Mem. Praf. Arts
Cynthiana, 41031
606-234-4090
Res. 205 S. Miller Street
Cynthiana, 41031
606-234-9314
FP 1612 79

Nichols, Joe A.
Alice J.
Ofc. P.O. Bax 458
Cynthiana, 41031
606-234-1900
Res. 121 Grandview Drive
Cynthiana, 41031
606-234-1614
FP 1602 63

Smiser, H. Tod
Ofc. Church St.
Cynthiana, 41031
GP 1602 30

Stephens, Donald R.
Sania
Ofc. 437 E. Pleasant
Cynthiana, 41031
606-234-4494
Res. 313 E. Pike Street
Cynthiana, 41031
606-234-6009
FP 1602 60

Wilson, Wilbur H.
Kaye
Ofc. 428 E. Pleasant St.
Cynthiana, 41031
606-234-4977
Res. RR #4, Bax 440F
Cynthiana, 41031
606-234-9341
FP 3441 64

Wright, Ardy C.
Betty
Ofc. 430 E. Pleasant St.
Cynthiana, 41031
606-234-3282
Res. 101 Queensway Drive
Cynthiana, 41031
606-234-6093
FP 1602 62

HART

Boeckmann, George B.
Wanda
Ofc. P.O. Bax 588
Harse Cave, 42749
502-786-2827
Res. Water Street
Harse Cave, 42749
502-786-1328
GP 1602 68

Hill, Keene M.
Ruby H.
Ofc. 300 Main St.
Harse Cave, 42749
502-786-2372
Res. 507 Rabin Raad
Harse Cave, 42749
502-786-2769
GP 4106 62

Middleton, Jr., James W.
Elizabeth
Ofc. Secand St.
Munfardville, 42765
502-524-7231
Res. Munfardville, 42765
502-524-0433
FP 1602 74

Nichols, Clem E.
Ofc. P.O. Bax 398
Munfardville, 42765
502-524-3641
Res. P.O. Bax 398
Munfardville, 42765
502-524-3678
FP 1602 69

Peterson, Gilman P.
Evelyn
Ofc. Clinic Bldg.
Harse Cave, 42749
502-786-2179
Res. 219 Duke Street
Cane City, 42127
502-773-3549
GP 1602 37

Salisbury, Evelyn E.
James
Ofc. P.O. Bax 579
Munfardville, 42765
502-524-7231
Res. Raute #1
Bannieville, 42765
502-524-0433
PD 1602 76

Speevack, Maher
Ofc. 121 W. Third
Munfardville, 42765
Res. 115 W. 3rd St.
Munfardville, 42765
502-524-5121
GP 1602 33

JEFFERSON

Aaron, William Stephen
Ann
Ofc. 801 Barret Ave. 116
Lauisville, 40204
502-583-6241
Res. 599 Garden Dr.
Lauisville, 40206
502-895-4012
SU 1602 69

Abell, Irvin
Helen
Ofc. Mackingbird Valley Rd.
Lauisville, 40207
Res. Mackingbird Valley Raad
Lauisville, 40207
502-896-1302
SU 1602 35

Abrams, Berel L.
Nancy
Ofc. 268 Medical Towers So.
Lauisville, 40202
502-583-5948
Res. 1518 Narthwind Raad
Lauisville, 40207
502-897-1629
SU 1602 56

Ackermann, Kurt
Gerda
Ofc. 17 Denham Rd.
Lauisville, 40205
Res. 17 Denham Raad
Lauisville, 40205
502-456-2519
OPH 5203 35

Acland, Robert D.
Sarah
Ofc. 3416 Barbaur Lane
Lauisville, 40222
502-583-8303
Res. 3416 Barbaur Lane
Lauisville, 40222
502-425-7942
PS 5088 64

JEFFERSON

Acland, Sarah
Ofc. 2120 Newburg Rd.
Suite 415
Louisville, 40205
502-456-1148
Res. 8605 Locust Ct.
Louisville, 40222
502-423-7968
P 6604 64

Adamkin, David H.
Corol
Ofc. 601 So. Floyd
Louisville, 40202
502-588-5889
Res. 9109 Brookwood North
Louisville, 40222
502-426-5446
PD 3115 74

Adams, Billy M.
Dempil
Ofc. Irelond Army Hosp./
Pediotrics
Fort Knox, 40121
502-624-9413
Res. Box 1023
Newgorden Stotion
Ft. Knox 40121
502-942-0960
PD 1602 47

Adams, Garrett
Lone
Ofc. 200 Eost Chestnut St.
Louisville, 40202
502-562-8809
Res. 2975 Lexington Rood
Louisville, 40206
502-895-8847
PD 3205 63

Adams, Brenton S.
Ofc. 3828 Bordstown Rd.
Louisville, 40218
502-459-4900
Res. 8806 Denington Drive
Louisville, 40222
502-425-0770
FP 1602 71

Adams, Cyrus E.
Morgoret V.
Ofc. 218 Breckinridge Ln.
Louisville, 40207
502-895-8878
P 1320 75

Adkins, Hugh P.
Floro
Ofc. 303 Medicol Towers
Louisville, 40202
Adkins
Res. Hugh P.
Louisville, 40207
502-893-5252
OBG 1602 41

Agrawal, Mahesh
Nirmolo
Ofc. 510 Nottinghom Pkwy.
Louisville, 40222
502-583-0909
Res. 510 Nottinghom Porkwoy
Louisville, 40222
502-425-9551
ANES 7024 73

Ahmad, Waheed
Deboroh
Ofc. 1919 Stote St., Suite 38
New Albony, IN, 47150
812-945-3372
Res. 1524 Sunset Drive
New Albony, IN, 47150
812-945-3266
SU 5088 64

Ahmadi, Bijan
Elizobeth
Ofc. Highlonds Doctors Bldg.,
201
Louisville, 40204
Res. 3909 Ashridge Dr.
Louisville, 40222
ORS

Akers, Robert H.
Borboro
Ofc. 2510 Grinstead Dr.
Louisville, 40206
Res. 2510 Grinstead Drive
Louisville, 40206
502-895-3834
R 1602 39

Al-Shami, Nadir
Anno Morie
Ofc. 9820 Third St. Rd.
Louisville, 40272
502-933-3313
Res. 10210 Heorthstone Court
Louisville, 40272
502-933-3131
IM 5088 62

Alberhasky, Robert J.
Hildo
Ofc. 517 Fincostle Bldg.
Louisville, 40202
502-583-2759
Res. 1711 Cloyton Rd.
Louisville, 40205
502-459-0414
IM 1403 41

Alfano, Frank M.
Ofc. 5428 Old Heody Rd.
Louisville, 40299
502-267-8981
Res. 5428 Old Heody Rood
Jeffersontown
502-267-8981
GP 2415 41

Algren, John T.
Chris
Ofc. UL Medicol School
Louisville, 40202
502-589-8855
Res. 506 Turnstile Troce
Louisville, 40223
502-244-0375
PD 1602 75

Allegra, Joseph C.
Morilyn
Ofc. Dept. of Med. U of L
Louisville, 40292
502-588-5241
Res. 1401 N. Buckeye Lone
Goshen, 40026
502-228-0410
IM 1602 74

Allen, John D.
Virginio G.
Ofc. 4000 Kresge Woy
Louisville, 40207
502-897-8226
Res. 23 Denhom Rd.
Louisville, 40205
502-452-6704
PATH 2001 41

Allen, Richard D.
Elizobeth M.
Ofc. 825 Borret Ave.
Louisville, 40204
502-584-2388
Res. 713 Wicklow Rd.
Louisville, 40207
502-895-0852
C 1602 67

Allen, J. Kenneth
Julie
Ofc. Medicol Towers So.
Louisville, 40202
502-585-4391
Res. 6116 Fox Volley Drive
Prospect, 40059
502-228-3161
R 3207 66

Allen, Robert E.
Ofc. UL—Anes.
Louisville, 40292
Res. Louisville, 40292
ANES 1602 78

Allen, J. Timothy
Ofc. 1349 S. Brook St. #3
Louisville, 40208
Res. 1349 S. Brook St. #3
Louisville, 40208
502-637-2685
FP

Allen, Jr., Charles E.
Elsie
Ofc. Ford P.O. Box 32310
Louisville, 40232
502-425-2720
Res. 4005 St. Germoine Court
Louisville, 40207
502-895-5635
OM 1602 44

Alt, Daniel B.
Borboro
Ofc. P.O. Box 4667
Louisville, 40204
502-589-4665
Res. 2108 Glenview Avenue
Louisville, 40222
502-425-0119
R 4701 75

Althaus, Jr., Arthur H.
Suson S.
Ofc. 9215 US Hwy 42
Prospect, 40059
502-228-1312
Res. 12501 Moyo Court
Prospect, 40059
502-228-4671
PD 1602 75

Alvarado, Esperanza
Dovid
Ofc. 245 Atwood St.
Corydon, IN, 47112
812-738-4251
Res. Route 1
Polmyro, Indiono, 47164
ANES 8505 72

Alvey, James E.
Suzonne
Ofc. Audubon Hosp.
Louisville, 40217
502-451-1448
Res. 8508 Bombi Woy
Louisville, 40214
502-935-1584
ANES 1602 56

Alvey, Frank B.
Ofc. 1215 Gorvin Ploce
Louisville, 40203
502-587-1161
Res. 1215 Gorvin Ploce
Louisville, 40203
502-635-5178
EM 1612 73

Ambach, John W.
Ann
Ofc. 2209 Bell Tovern Ct.
Louisville, 40207
502-447-5765
Res. 2209 Bell Tovern Court
Louisville, 40207
502-896-4076
FP 1602 57

Amin, Mohammad
Elizobeth
Ofc. Medicol Towers No.
Louisville, 40202
502-587-6904
Res. 608 Club Lone
Louisville, 40207
502-893-6468
U 8303 63

Amin, Rajanbhai R.
Ofc. 1500 S. 7th St.
Louisville, 40208
FP 7032 74

Anderson, William H.
Edno Ruth
Ofc. 323 E. Chestnut St.
Louisville, 40202
502-589-4321
Res. 509 Scorsdole Rood
Louisville, 40243
502-245-4575
PUD 1211 49

Andrews, Billy F.
Faye
Ofc. School of Medicine
Louisville, 40292
502-562-8825
Res. Route 3, Box 547
Floyds Knobs, IN, 47719
812-944-8087
PD 3207 57

JEFFERSON

Ante, Jose P.
Glorio G.
Ofc. Centrol State Hasp.
Lauisville, 40223
502-245-4121
Res. 4220 Wheeler Avenue
Lauisville, 40215
502-361-7972
P 8506 54

Anvari, Taha S.
Ofc. 801 Barret Ave. #318
Lauisville, 40204
502-585-5094
N 7102 50

Anzures, Cecilia M.
Ofc. 4001 Dutchmons Lane #5C
Lauisville, 40207
502-897-1839
Res. 5517 Apoche Raod
Lauisville, 40207
502-897-7967
ANES 5088 67

App, Frank E.
Mary Kothryn
Ofc. 4468 Dixie Hwy.
Lauisville, 40216
502-447-2771
Res. 5805 Orian Rd.
Lauisville, 40222
502-425-6894
OBG 1602 46

Arena, Paul J.
Ann
Ofc. 5F Suburbon Medical Plazo
Louisville, 40207
502-897-0228
Res. 8312 Stor Paint Caurt
Praspect, 40059
502-228-3611
IM 3701 65

Arguedas, Armando
Ileana
Ofc. 801 Borret Ave. #319
Louisville, 40204
502-459-7220
Res. 918 Cannans Lone
Lauisville, 40207
ANES 5088 49

Arik, Mehmet
Sevim
Ofc. 2120 Newburg Rd.
Lauisville, 40205
502-458-1514
Res. 2603 Waadside Dr.
Louisville, 40207
502-893-7319
P 9302 46

Armbruster, William H.
Emily
Ofc. #7 Conterbury Dr.
Louisville, 40220
Res. 7 Canterbury Drive
Lauisville, 40220
502-454-5823
IM 1602 45

Armstrong, Lyman G.
Koren
Ofc. 601 South Flayd St.
Lauisville, 40202
502-583-5524
Res. 95 Indian Hill Trace
Louisville, 40207
502-895-0508
OBG 301 67

Arnett, John W.
Coralyn
Ofc. 1809 Stondord Ave.
Louisville, 40210
502-774-5711
Res. 612 Emery Raod
Lauisville, 40206
502-893-3398
IM 1612 71

Arnn, Edward T.
Marie
Ofc. 505 Cauntry Lane
Lauisville, 40207
502-897-8226
Res. 505 Country Lane
Lauisville, 40207
502-895-3749
PATH 1602 43

Arora, Krishan K.
Ofc. 224 E. Broodway
Lauisville, 40202
502-587-9660
Res. 3205 Cherrytree Lone
Praspect, 40059
502-228-1741
NEP 5088 65

Ash, Warren H.
Ofc. 100 E. Liberty St. 307
Lauisville, 40202
502-584-0166
Res. 6404 Shadaw Waad Drive
Praspect, 40059
502-228-8336
ANES 3701 47

Atasoy, Erdogan
Turkon
Ofc. 1001 Dactars Office Building
Louisville, 40202
502-581-9563
Res. 615 Riverwaad Drive
Louisville, 40207
502-561-4267
SU 9302 57

Atherton, L. Douglas
Lauise
Ofc. 801 Borret Ave.
Louisville, 40204
502-583-3645
Res. 2552 Waadbaurne Avenue
Louisville, 40205
U 1602 43

Atherton, C. Victor
Stella
Ofc. 3525 Ephroim McDawell Dr.
Louisville, 40205
502-452-9269
Res. 1824 Share Drive South
#104
St. Petersburg, FL, 33707
813-345-4150
GP 3501 32

Attum, Abdulla
Mervat
Ofc. 718 Medicol Towers Narth
Louisville, 40202
Res. 266 Lauire Village Raod
Louisville, 40223
502-245-6344
TS 6501 70

Aud, Richard E.
Caral
Ofc. 5601 S. Third St.
Louisville, 40214
502-361-8801
Res. 7000 Peppermill Lane
Lauisville, 40228
502-239-0685
FP 1612 71

Auerbach, S. Pearson
Minx
Ofc. Doctars Office Bldg.
Louisville, 40202
502-584-6171
Res. 1400 Willaw Apt. #5
Louisville, 40205
502-451-1922
ORS 1602 49

Azzam, Roshi A.
Andree Mary
Ofc. 2120 Newburg Rd. 419
Lauisville, 40205
502-451-5400
Res. 700 Calanel Andersan
Porkway
Lauisville, 40222
502-423-1397
P 5088 62

Babey, III, Joseph C.
Sandie
Ofc. 4430 Crowford Ave.
Lauisville, 40258
502-935-5633
Res. 821 Rugby Ploce
Lauisville, 40222
502-425-4477
PD 1620 66

Bada, Henrietta
Ofc. 853 Jefferson Ave. Rm. 301
Memphis, TN, 38163
901-528-5950
Res. 1699 Belvedere Caurt
Memphis, TN, 38104
901-725-0712
PD 8507 69

Badenhausen, Walter E.
Gerri
Ofc. Medicol Towers Sa.
Louisville, 40202
502-587-1236
Res. 490 Lightfaat Raad
Louisville, 40207
502-895-6085
ORS 3709 56

Bailen, James L.
Sandy
Ofc. 4122 Shelbyville Rd. C
Lauisville, 40207
502-897-7575
Res. 6007 Hunting Raod
Lauisville, 40222
502-426-5293
U 1602 72

Baker, Simeon S.
Jeon
Ofc. 2604 So. 4th St.
Lauisville, 40208
502-637-6011
Res. 2348 Ingleside Drive
Lauisville, 40205
502-458-8856
FP 1602 36

Baker, Harold W.
Julio
Ofc. Medical Tawers S. #262
Lauisville, 40202
502-582-1652
Res. 4400 W. Highway 22
Crestwaad, 40014
502-241-8023
OBG 1907 48

Baker, William H.
Alberta
Ofc. Norton Radialagy Dept., NKC
Louisville, 40202
502-562-7605
Res. 2319 Clarkwaad Rd.
Lauisville, 40207
502-895-3146
R 1320 59

Baker, James G.
Potsy
Ofc. 2007 Bannycostle
Lauisville, 40205
502-451-3948
Res. 100 Crass Raad
Lauisville, 40204
502-458-3587
FP 1602 63

Baker, Robert F.
Kristine
Ofc. 601 Sa. Flayd St.
Lauisville, 40202
502-585-4376
Res. 83 Warriar Raod
Lauisville, 40207
502-895-5940
ORS 3406 68

Baker, Richard W.
Bonito
Ofc. 5135 Dixie Hwy.
Lauisville, 40216
502-447-7214
Res. 2402 Phoenix Hill
Louisville, 40207
502-897-5516
PUD 1612 76

Baker, William T.
Lono
Ofc. 262 Medical Towers So.
Louisville, 40202
502-582-1652
Res. 2947 Roinbaw Drive
Louisville, 40206
502-897-3241
OBG 2007 77

Baker, Charles G.
Lais
Ofc. 6748 Keystone Dr.
Sorosato, FL, 33581
Res. 6748 Keystone Drive
Sorosato, FL, 33581
813-922-4821
D 1602 34

JEFFERSON

Bakus, Karen S.
Ronald
Ofc. 1974 Douglos Blvd.
Louisville, 40205
502-451-5560
Res. 2028 Lauderdole Rood
Louisville, 40205
502-458-7472
PD 1602 70

Ball, Christina F.
Thomos
Ofc. University Hospitol
Louisville, 40202
502-588-5390
Res. 2511 Ronsdell Avenue
Louisville, 40204
502-458-6949
P 1602 79

Banchongmanie, Ronachai
Supunpim
Ofc. 834 E. Broodwoy #400
Louisville, 40204
502-589-4030
Res. 5004 Springdale Rood
Louisville, 40222
502-228-0051
OBG 9202 68

Banerjee, Timir
Rito
Ofc. 1900 Bluegross Ave. 200
Louisville, 40215
502-368-1681
Res. 5807 Cobin Woy
Louisville, 40222
SU 5088 67

Banis, Jr., Joseph C.
Phyllis
Ofc. 700 Childrens Foundation
Bldg.
Louisville, 40202
502-582-8303
Res. 3606 Trailridge Road
Louisville, 40222
PS 801 73

Barbie, Ronald N.
Carol F.
Ofc. 718 Medicol Towers N.
Louisville, 40202
502-584-6413
Res. 2107 Round Ridge Rd.
Louisville, 40207
502-895-3685
SU 1701 71

Barnes, James R.
Gene
Ofc. 110 Audubon Med. Plozo
Louisville, 40217
502-636-3387
OBG 1602 55

Barron, Bernard W.
Judith
Ofc. 3333 Bordstown Rd.
Louisville, 40218
502-452-6337
Res. 1806 Kline Court
Louisville, 40205
502-454-4149
PD 1602 53

Barrows, George H.
Jone
Ofc. 3020 Juniper Hill Rd.
Louisville, 40206
502-588-5341
Res. 3020 Juniper Hill Rood
Louisville, 40206
502-895-6797
PATH 1602 72

Bate, John T.
Ofc. 2524 Glenmory Ave.
Louisville, 40204
Res. 2524 Glenmary Ave.
Louisville, 40204
502-451-5182
SU 4501 22

Bautista, Fe Leano
Constancio
Ofc. 201 West St.
Mt. Woshington, 40047
502-538-7425
Res. 4125 Taylorsville Rood
Louisville, 40220
502-451-0288
FP 5088 66

Bautista, Constancio M.
Fe
Ofc. 201 W. St.
Mt. Woshington, 40047
502-538-7425
Res. 4125 Toylorsville Rood
Louisville, 40220
502-451-0288
EM 5088 67

Bean, Robert J.
Morgoret V.
Ofc. 3714 Beaufort Ln.
Louisville, 40207
Res. 3714 Beoufort Ln.
Louisville, 40207
ANES 1602 81

Beanblossom, Robert L.
Jan
Ofc. 9822 Third St. Rd.
Volley Stotion, 40272
502-937-3864
Res. 2500 Newburg Rood
Louisville, 40205
502-452-1228
GP 1602 61

Beatty, Oren A.
Ursula
Ofc. 3717 Honover Rd.
Louisville, 40207
Res. 3717 Honover Rd.
Louisville, 40207
502-897-9267
PUD 1602 30

Becker, Michael D.
Suson Ann
Ofc. 3901 Dixie Hwy.
Louisville, 40216
502-448-7114
Res. 8311 Pine Grove Court
Louisville, 40214
FP 1602 74

Beilman, Henry J.
Mory Rose
Ofc. 5029 Preston Hwy.
Louisville, 40213
502-969-1357
Res. 3120 Newburg Rd.
Louisville, 40205
502-451-2858
GP 1602 49

Beilman, Kenneth M.
Cynthio
Ofc. 1930 Bishops Ln. 502
Louisville, 40218
502-459-0646
Res. 1233 Holsworth Lane
Louisville, 40222
502-425-3049
EM 1612 75

Belker, Arnold M.
Terry
Ofc. 250 E. Liberty St.
Louisville, 40202
502-584-0651
Res. 3507 St. Germoine Court
Louisville, 40207
502-895-4711
U 1602 58

Bell, Jesse B.
Geneva
Ofc. 800 So. Fourth St.
Louisville, 40203
Res. 800 S. 4th Street #2307
Louisville, 40203
502-589-5317
FP 4107 31

Bell, Edward E.
K
Ofc. 247 Medicol Arts Bldg.
Louisville, 40217
502-452-2448
Res. 1913 Dillon Drive
Louisville, 40205
502-459-1136
OBG 1602 43

Bell, John P.
Noncy
Ofc. 850 Barret Ave.
Suite 203
Louisville, 40204
502-582-3827
Res. 1639 Spring Drive
Louisville, 40205
502-451-4729
P 4105 40

Bennett, W. Neal
Ofc. 612 Medical Towers North
Louisville, 40202
502-584-8988
Res. 1041 Everett Avenue, #44
Louisville, 40204
502-458-4519
ANES 1602 54

Berg, Harold F.
Peorl
Ofc. Doctors Office Bldg.
Louisville, 40202
502-583-8819
Res. 608 Jorvis Lane
Louisville, 40207
502-893-2581
SU 1602 42

Bergman, S. Eric
Corol Lynn
Ofc. 8006 Montero Dr.
Prospect, 40059
502-456-6001
Res. 8006 Montero Drive
Prospect, 40059
OTO 1701 69

Bergner, Robert P.
Betty
Ofc. 3613 Winchester Rd.
Louisville, 40207
Res. 3613 Winchester Road
Louisville, 40207
502-896-4689
ANES 2007 44

Berman, Gerald
Benito
Ofc. 314 Medicol Towers Bldg.
Louisville, 40202
502-583-4859
Res. 2116 Starmont Road
Louisville, 40207
502-895-1303
OPH

Berman, Henry I.
Ofc. Hurricane Hills Rt. 1
Boston, 40107
Res. Box 284, Hurricone Hills
Boston, 40107
833-2223
U

Bernhard, C. Melvin
Martha
Ofc. 2511 Poplor Crest Rd.
Louisville, 40207
Res. 2511 Poplor Crest Rd.
Louisville, 40207
502-896-1937
SU 1602 33

Bersot, Jr., James L.
Morilyn
Ofc. 6923 Wythe Hill Circle
Prospect, 40059
502-587-0915
Res. 6923 Wythe Hill Circle
Prospect, 40059
502-587-0915
IM 1602 76

Bertolone, Jr., S. J.
Maureen
Ofc. 601 S. Floyd St.
Suite 500
Louisville, 40202
502-562-8812
Res. 531 Poppy Way
Louisville, 40206
502-895-8487
PD 1602 70

Biagtan, Adelina C.
Jesus
Ofc. 2125 Old Shepherdsville Rd.
Louisville, 40218
502-451-7737
Res. 4201 Winter Pork Drive
Louisville, 40218
502-491-8585
FP 8507 60

Bierly, Jr., George R.
Ofc. 1124 Medical Arts Bldg.
Louisville, 40217
502-458-3286
SU 1602 45

JEFFERSON

Bilotta, Joseph T.
Teresa
Ofc. 608 Medical Towers
Louisville, 40202
502-584-0289
Res. 4327 Kinloch Road
Louisville, 40207
502-893-6038
OBG 1602 77

Bingham, Roy E.
Blonche
Ofc. 9315 Toylorsville Rd.
Jeffersontown, 40299
Res. 9315 Taylorsville Rood
Jeffersantawn, 40299
502-267-1224
P 1602 32

Birkhead, Ben M.
Carole
Ofc. P.O. Box 4667
Louisville, 40204
502-589-4665
Res. 4095 Mossie Avenue
Louisville, 40207
502-897-7745
R 1602 64

Bishop, John A.
Alma
Ofc. 731 Waterford Rd.
Louisville, 40207
Res. 731 Woterford Road
Louisville, 40207
502-895-6685
GP 1602 33

Bizot, Byron
Rita
Ofc. 718 Circle Hill
Louisville, 40207
Res. 718 Circle Hill Raad
Louisville, 40207
502-896-0778
GP 1602 31

Bizot, William H.
Mickey
Ofc. 807 Alden Rd.
Louisville, 40207
Res. 807 Alden Raod
Louisville, 40207
502-895-4493
SU 1602 37

Bizot, David H.
Nancy
Ofc. Baptist East
Dactors Bldg. 404
Louisville, 40207
502-895-3441
Res. 8603 Loftinghom Ct.
Louisville, 40222
502-425-9987
IM 1602 64

Blair, Earl
Nellie
Ofc. 211 Perrymon Rd.
Louisville, 40207
Res. 211 Perryman Rood
Louisville, 40207
GP 1602 31

Bland, James G.
Noncy
Ofc. 10404 Eosum Rd.
Louisville, 40299
502-245-9738
Res. 10404 Eosum Road
Louisville, 40299
502-267-4595
P 1602 60

Bland, Kirby I.
Lynn
Ofc. 503 Childrens Found. Bldg.
Louisville, 40202
502-583-8303
Res. 4019 Norbourne Boulevord
Louisville, 40207
502-895-5820
SU 102 68

Blandford, Charles Henry
Alice
Ofc. 1502 Lynn Woy
Lyndon, 40222
502-425-2366
Res. 1502 Lynn Woy
Louisville, 40222
502-425-2366
GP 1602 29

Blandford, Jr., Joseph M.
Ofc. 9822 3rd St.
306 S.W. Prof. Bldg.
Louisville, 40272
502-935-2121
Res. 370 N. 26th Street
Louisville, 40212
502-776-2523
SU 1602 74

Blanford, Arthur T.
Nancy Jane
Ofc. 366 Ridgeway Ave.
Louisville, 40207
502-895-4263
Res. 366 Ridgewoy Ave.
Louisville, 40207
IM 1602 76

Blevins, Harold W.
Linda
Ofc. 454 Medical Towers S.
Louisville, 40202
502-585-3235
Res. 2303 Stonnye Drive
Louisville, 40222
502-425-3046
OTO 1005 64

Blevins, Joseph W.
Lauro
Ofc. 1701 Sweetbriar Lane
Louisville, 40207
502-452-4101
Res. 1701 Sweetbrior Lone
Louisville, 40207
502-895-5589
OM 1901 47

Bloch, W. Austin
Mory Frances
Ofc. 2116 Douglass Blvd.
Louisville, 40205
502-583-3671
Res. 2116 Dougloss Baulevord
Louisville, 40205
502-452-9826
IM 2001 33

Bloch, Charles L.
Margaret Ellen
Ofc. 409 Medical Towers N.
Louisville, 40202
502-584-3624
Res. 5219 Moccosin Trail
Louisville, 40207
502-893-5203
ENT 1602 37

Block, J. Bradford
Juanito
Ofc. 8050 Kugler Mill Rd.
Cincinnoti, OH, 45243
513-793-6289
Res. 8050 Kugler Mill Road
Cincinnoti, OH, 45243
513-793-6289
OM 1602 66

Blodgett, William A.
Cando
Ofc. 506 Fincostle Bldg.
Louisville, 40202
502-587-8471
Res. 87 Valley Rood
Louisville, 40204
502-456-6780
IM 3101 44

Bloom, Gerald E.
Jo Ann
Ofc. 4000 Kresge Woy
Louisville, 40207
502-897-8121
Res. 3713 Trail Ridge Rood
Louisville, 40222
502-426-4639
R 1901 58

Bloss, Bryant
Bette
Ofc. St. Mary Medicol Bldg.
Evansville, IN, 47715
812-479-8571
Res. 4131 Lincaln Avenue
Evansville, IN, 47715
812-477-9933
ORS 1602 58

Blumenreich, Martin S.
Potricio E.
Ofc. 529 S. Jackson St.
Louisville, 40292
502-588-5245
Res. 4517 Dannywood Rd.
Louisville, 40220
502-452-9684
IM 5088 75

Boerner, Arthur R.
Cathy
Ofc. 207 Sparks Ave., #306
Jeffersanville, IN, 47130
812-228-9646
Res. 5729 Lentzier Trace
Jeffersonville, IN, 47130
812-288-5133
OBG 1602 75

Bohman, Bradford
Miriam
Ofc. 1248 Royol Ave.
Louisville, 40204
Res. 1248 Rayol Avenue
Louisville, 40204
ANES

Booth, Thomas E.
Ofc. 431 Medicol Arts Bldg.
Louisville, 40217
502-459-7145
Res. 6204 Innes Trace Rd.
Louisville, 40222
502-425-4072

Boram, Lawrence H.
Bonnie
Ofc. Jewish Hosp.
217 E. Chestnut
Louisville, 40202
502-587-4330
Res. 1918 Chorbdin Pl.
Louisville, 40207
502-893-3355
PATH 1602 67

Bordador, Teodoro
Bosilia
Ofc. Suite 302
Jeffersonville, IN, 47130
812-283-9257
Res. 214 Rose Wood Drive
Jeffersonville, IN, 47130
812-283-9257
P

Borkar, Bhagwant
Roopo
Ofc. 5141 Dixie Hwy.
Louisville, 40216
502-447-3100
Res. 2003 Croghen House Drive
Louisville, 40207
502-897-7951
GE 7012 69

Bornstein, Alan M.
Marilyn
Ofc. 1169 Eastern Pkwy.
Louisville, 40217
502-458-1351
Res. 3007 Shollcross Way
Louisville, 40222
502-426-2277
IM 1602 58

Borsch, Warren W.
Holly
Ofc. 4001 Dutchmans Ln. #5-H
Louisville, 40207
502-897-2545
Res. 723 Danshall Dr.
Louisville, 40206
502-895-5848
FP 1602 43

Bose, Sajal K.
Kolyoni
Ofc. 4010 Dupont Cir.
Louisville, 40207
502-896-9737
Res. 600 Scion Drive
Louisville, 40223
502-425-9938
P 5088 73

Bowen, Joseph Andrew
Ofc. P.O. Box 114
Foirhope, AL, 36532
U 3441 25

JEFFERSON

Bowers, Jr., Marvin A.
Faye
Ofc. Charterton Hosp.
Box 400
LaGronge, 40031
502-222-7148
Res. 614 Brior Hill Rd.
Louisville, 40206
502-895-7280
ANES 1602 50

Bowlds, Charles F.
Bettie Jo
Ofc. 408 Breckinridge Ln.
Lauisville, 40207
502-582-1316
Res. 408 Breckinridge Lone
Louisville, 40207
502-897-6883
IM

Bowling, Joseph R.
Potty
Ofc. Suite 610
Audubon Med. Plazo
Louisville, 40217
502-635-7455
Res. 814 Rugby Ploce
Lauisville, 40222
502-895-7280
FP 1612 64

Boyea, Lyle H.
Lindo
Ofc. Applionce Park
Apt. 3 17D
Lauisville, 40225
502-452-4101
Res. 1125 Red Fox Rd.
Louisville, 40205
502-459-8738
OM 3115 49

Bradley, Herbert C.
Dainty
Ofc. 612 Medicol Towers Narth
Lauisville, 40202
502-584-8988
Res. 1901 Daleview Lane
Louisville, 40207
502-893-3103
ANES 1602 53

Bradnan, William A.
Ofc. 200 E. Chestnut St.
Lauisville, 40202
502-589-8611
Res. 56 Hill Raad
Louisville, 40204
502-452-6562
P 3440 68

Bradshaw, Harold W.
Sue
Ofc. 1221 Heyburn Bldg.
Lauisville, 40202
502-585-4082
Res. 2816 Arlington Rd.
Louisville, 40220
502-452-6751
SU 1602 50

Brady, Burns M.
Kosey
Ofc. 9822 Old 3rd St. Rd.
Suite 100
Louisville, 40272
502-935-1124
Res. 2405 Anchar Woy
Louisville, 40223
502-245-9394
FP 1602 64

Brewer, McHenry S.
Cecy
Ofc. 3950 Kresge Way #105
Lauisville, 40207
502-897-0239
Res. 3723 Fairway Ln.
Louisville, 40207
502-896-6704
SU 1602 46

Brice, Charles T.
Noncy
Ofc. 979 East 3rd St. #1001
Chattanooga, TN, 37403
615-267-2392
Res. 1801 Sunset Terrace
Chottonoogo, TN, 37404
615-624-7552

Briggs, Susan E.
Richard H.
Ofc. 601 S. Floyd St.
Suite 700
Louisville, 40232
502-893-0118
Res. 724 Waterford Raad
Louisville, 40207
502-893-0118
SU 1243 74

Brill, Joseph B.
Nina S.
Ofc. 207 W. 13th St.
Jeffersonville, IN, 47130
502-283-4491
Res. 2400 Chatteswarth Caurt
Louisville, 40222
502-425-4532
P 1602 54

Briones, Voltaire C.
Fe
Ofc. 3510 Taylar Blvd.
Louisville, 40215
502-363-4188
Res. 303 Fall Horvest Caurt
Lauisville, 40223
502-245-6890
IM 8506 66

Briones, Fe Ramos
Voltaire
Ofc. Lakeland Rd.
Louisville, 40223
502-245-4121
Res. 303 Fall Horvest Court
Lauisville, 40223
502-245-6890
GP 8506 65

Brockman, Edward J.
Morguerite
Ofc. 4500 Churchman Ave.
Louisville, 40215
502-366-1449
Res. 444 Kenwoad Drive
Lauisville, 40214
502-366-1449
FP 1320 46

Brohm, Charles M.
Vicki
Ofc. 6902 Foxcraft Rd.
Praspect, 40059
502-584-0167
Res. 6902 Faxcraft Raad
Prospect, 40059
502-228-0568
ANES 1602 66

Bronner, Irvin E.
Pot
Ofc. 4602 Southern Pkwy.
Louisville, 40214
502-368-3392
Res. 320 Kenwoad Hill Rood
Louisville, 40214
OBG 1602 58

Brown, David E.
Patricia D.
Ofc. 2120 Newburg Rd. #404
Lauisville, 40205
502-456-2440
Res. 3707 Quoil Hollaw Court
Lauisville, 40222
502-426-8663
P 1602 61

Brown, Jr., Manuel L.
Goyle
Ofc. 4801 Monslick Rd.
Lauisville, 40216
502-361-0422
Res. 4526 Sauthern Pkwy.
Louisville, 40214
502-361-0422
FP 1602 72

Browne, Philip T.
Vicki
Ofc. 8308 Craydan Circle
Louisville, 40222
502-897-6579
Res. 8308 Croydon Circle
Lauisville, 40222
502-425-5365
ORS 1701 69

Bruce, III, Charles O.
Sharon
Ofc. 121 S. Sherrin Ave.
Lauisville, 40207
502-897-1837
Res. 216 Brawns Lane
Louisville, 40207
502-897-7021
OPH 1602 71

Bruce, Jr., Charles O.
Frances
Ofc. 121 S. Sherrin Ave.
Lauisville, 40207
502-897-1837
Res. 121 South Sherrin Ave.
Louisville, 40207
502-897-1837
OPH 1602 44

Bruning, Walter O.
Joonne
Ofc. 4001 Dutchmans Ln. 2B
Louisville, 40202
502-897-9821
Res. 1103 Carlimar Lane
Lauisville, 40222
IM 1612 75

Bryant, Charles G.
Mildred
Ofc. 1169 Eastern Pkwy. #3357
Louisville, 40217
502-452-1558
Res. 1612 Gardiner Ln.
Unit 120
Louisville, 40205
502-451-6451
FP 1602 37

Bryant, Glenn W.
Ann
Ofc. 3950 Kresge Way
Lauisville, 40207
502-897-0287
Res. 527 Ridgewoad Rd.
Louisville, 40207
502-896-0272
OBG 1602 38

Bryant, J. Ray
Karen
Ofc. 6-D Suburban Med. Ploza
Lauisville, 40207
502-897-9811
Res. 4 River Hill Raad
Lauisville, 40207
502-897-9811
TS 1602 42

Bucayu, Jr., Nemesio
Linda
Ofc. 4602-2B Southern Pkwy.
Louisville, 40214
502-366-8679
Res. 1901 Boinridge Row Dr.
Lauisville, 40207
502-896-4687
ANES 8507 62

Buchanan, Jerry B.
Jan
Ofc. 323 E. Chestnut St.
Lauisville, 40202
502-585-2241
Res. 6207 Deep Creek Dr.
Praspect, 40059
502-228-8947
R 1602 65

Buchino, John J.
Kathleen
Ofc. Kosoir Childrens Hosp.
Louisville, 40232
502-589-8992
Res. 10 Rio Vista Drive
Lauisville, 40207
502-893-0826
PATH 1602 74

Bumgardner, J. Samuel
Ofc. 5800 Coach Gate Wynde,
#318
Louisville, 40207
Res. 5800 Caach Gote Wynde,
#318
Lauisville, 40207
502-893-2788
ENT 1602 28

Bundy, Vernon
Molly
Ofc. 700 Spring St.
New Albony, IN, 47150
812-944-6488
Res. 1303 Ridgewoy Avenue
New Albany, IN, 47150
812-945-4650
SU

JEFFERSON

Bunting, Dewey L.
Gay
Ofc. 13984 Paplar Ln.
Lauisville, 40299
Res. 13984 Paplar Lane
Lauisville, 40299
OM 1602 27

Bunting, John L.
Linda
Ofc. 4001 Dutchmans 1C
Suburban Medical Plaza
Lauisville, 40207
502-897-0649
Res. 13984 Paplar Ln.
Lauisville, 40299
502-245-3212
SU 1602 66

Burckardt, Robert J.
Susie
Ofc. 4001 Dutchmans Lane
Lauisville, 40207
502-897-1839
Res. 8800 Swan Hill Rd.
Lauisville, 40222
502-245-3212
ANES 4105 74

Burke, Daniel W.
Ofc. 801 Barret Ave. - 208
Lauisville, 40204
502-584-2421
Res. 3609 Brawnsbara Raad
Lauisville, 40207
502-895-7678
OPH 1602 57

Burke, Thomas F.
Elisabeth
Ofc. VA Medical Ctr.
Zarn Ave.
Lauisville, 40202
502-895-3401
Res. 2309 Tuckaha
Lauisville, 40207
502-893-8400
P 7302 52

Burke, Timothy N.
Cindy C.
Ofc. 2509 Paul Crest Ct.
Lauisville, 40222
502-454-3900
Res. 2509 Paul Crest Ct.
Lauisville, 40222
502-423-1974
P 1602 78

Burnam, R. Rodes
Ofc. 3427 Medical Arts Bldg.
Lauisville, 40217
502-459-4545
Res. 722 Daneshall Dr.
Lauisville, 40206
502-895-5041
SI 1602 51

Burton, Jeffrey K.
Ofc. UL Pediatrics
Lauisville, 40292
PD 3206 78

Buschemeyer, Jr., Wm. C.
Artie
Ofc. 511 Briar Hill Rd.
Lauisville, 40206
502-583-3645
Res. 511 Briar Hill Rd.
Lauisville, 40206
502-895-0770
U 1602 71

Butterworth, Jane R.
Ofc. 3120 Raintree Ln.
Rackford, IL, 61111
815-968-6861
Res. 3120 Raintree Lane
Rackford, IL, 61107
815-877-0016
PRM 1602 74

Callahan, Edward L.
Ofc. SS Mary & Elizabeth Hasp.
Lauisville, 40215
502-361-6520
Res. 502-897-9759
PATH 1602 60

Callaway, Robert G.
Mary Elizabeth
Ofc. 4500 Churchman Ave.
Lauisville, 40215
502-363-3484
Res. 3310 Linnet
Lauisville, 40213
502-634-8852
FP 1602 55

Callen, Jeffrey P.
Susan
Ofc. 554 Medical Towers Sa.
Lauisville, 40202
502-583-1749
Res. 5404 Puebla Rd.
Lauisville, 40207
502-895-5255
D 2101 72

Campbell, Thomas E.
Nancye
Ofc. 224 E. Braadway
Suite 400
Lauisville, 40202
502-587-8402
Res. 415 Jarvis Lane
Lauisville, 40207
502-893-2066
OPH 1602 58

Campbell, Peter C.
Ja Ann
Ofc. 224 E. Braadway
Suite 400
Lauisville, 40202
502-245-8013
Res. 1401 Elm Raad
Ancharage, 40223
502-245-8013
OPH 1602 61

Campomanes, Ildefonso A.
Mela Jean
Ofc. Nartans-Childrens Hasp.
Lauisville, 40202
502-562-7100
Res. 2504 Little Hills Lane
Lauisville, 40223
502-245-2743
ANES 5088 63

Canan, E. Dean
Shirley
Ofc. Medical Towers Sa - #766
Lauisville, 40202
502-585-4114
Res. Star Rt.
Old Lauisville Rd.
Fisherville, 40023
502-589-4637
SU 1602 57

Canfield, Bourbon E.
Linda
Ofc. 308 Medical Towers Bldg.
Lauisville, 40202
502-587-8671
Res. 5401 Hempstead Rd.
Lauisville, 40207
502-895-3659
SU 1602 46

Cantor, Howard L.
Lee Ann
Ofc. 3006 Lime Kiln Ln.
Lauisville, 40222
502-897-1839
Res. 3006 Lime Kiln Lane
Lauisville, 40222
502-426-0930
ANES 1320 81

Carlson, Jr., John A.
Judy
Ofc. 601 Sa. Flayd St.
Lauisville, 40202
502-588-5814
Res. 8710 Creightan Caurt
Lauisville, 40207
502-426-8365
OBG 0802 74

Carnighan, Robert H.
Janet
Ofc. 4000 Kresge Way
Lauisville, 40207
502-897-8226
Res. 36 Edge Hill Rd.
Praspect, 40059
502-228-8289
PATH 4105 67

Carrasquer, Gaspar
Caral
Ofc. HSC P.O. Bax 35260
Lauisville, 40292
502-588-5757
Res. 1804 Bunker Hill Caurt
Lauisville, 40205
502-459-3767
NEP 8903 51

Carroll, Michael G.
Denise
Ofc. 5003 H Sundawn Ct.
Lauisville, 40222
502-361-0105
Res. 1874 Trevillian Way
Lauisville, 40205
502-451-8988
IM 1602 71

Cartaya, Mario W.
Bertha
Ofc. Rt. 5, Bax 48B
Campbellsville, 42718
Res. Raute 5, LWA 48B
Campbellsville, 42718
789-1668
GP 6301 47

Carter, Lila H.
Ofc. 4001 Dutchmans Lane - #5C
Lauisville, 40207
502-897-1839
Res. 500 Ridgewaad Raad
Lauisville, 40207
502-895-6451
ANES 1602 58

Casey, John J.
Babbie
Ofc. 2120 Newburg Rd.
Lauisville, 40205
502-456-2850
Res. 2809 Newburg Raad
Lauisville, 40205
502-458-3446
P 1602 50

Casper, R. Burke
Margy
Ofc. 4001 Dutchmans Lane
Lauisville, 40207
502-893-1182
Res. 5801 West Highway #42
Praspect, 40059
502-222-9739
R 1602 50

Caudill, W. Neville
Eleanar
Ofc. 104 Baptist E.
Dactars' Bldg.
Lauisville, 40207
502-895-9461
Res. 2130 Dauglass Blvd.
Lauisville, 40205
502-452-1954
U 1602 59

Cecil, Jr., Joseph R.
Alice
Ofc. 703 Hickary Ln.
Lauisville, 40223
502-897-0639
Res. 703 Hickary
Lauisville, 40223
502-245-6405
IM 1602 72

Celletti, John K.
Ofc. UL Emer. Med.
Lauisville, 40292
502-589-4321
Res. 2011 Appletan Ln.
Lauisville, 40216
502-448-6642
EM

Chaplin, Jr., Edward R.
Margaret
Ofc. 3 Auduban Plaza #350
Lauisville, 40217
502-583-0696
Res. 6300 Hunting Harbar Drive
Praspect, 40059
502-228-0886
N 1602 71

Charasika, James D.
Margie
Ofc. 1500 Sa. 7th St.
Lauisville, 40208
502-636-0516
Res. 13985 Paplar Lane
Lauisville, 40299
502-267-6661
FP 4107 76

JEFFERSON

Chase, Sheldon
Honnoh
Ofc. 200 E. Chestnut St.
Lauisville, 40202
502-562-8853
Res. 3101 Dariltan Caurt
Lauisville, 40222
502-562-8853
P 2101 70

Chaudhri, Nonihal S.
Ofc. 2120 Newburg Rd.
Suite 410
Lauisville, 40205
502-456-4420
Res. 589 Garden Drive
Louisville, 40206
502-895-0274
P 8701 68

Chaudhry, Aftab A.
Yasmeen
Ofc. 207 Sparks Ave.
Jeffersanville, IN, 47130
812-945-4000
Res. 3001 Braakhoven Dr.
New Albony, IN, 47150
812-945-4000
5088 71

Cheatham, Jr., Wm. C.
Mary Ann
Ofc. 7203 Fox Horbar Rd.
Praspect, 40059
502-361-6303
Res. 7203 Fax Harbar Rd.
Prospect, 40059
502-228-8088
R 1602 68

Chen, Julia
Lung T. Yam
Ofc. 2102 Twin Hill Rd.
Louisville, 40207
502-588-5323
Res. 2102 Twin Hill Raod
Lauisville, 40207
PD 5088 61

Cheng, Samuel H.
Melvia
Ofc. 228 Medicol Tawers Sa.
Lauisville, 40202
502-585-2361
Res. 908 Iala Raad
Louisville, 40207
GE 6102 48

Cherian, Ponnattu
Sora
Ofc. 1900 Bluegross
St. Marys #300
Louisville, 40215
502-361-0105
Res. 7302 Fax Harbor Rd.
Prospect, 40059
502-228-0717
C 5088 70

Cherian, Saramma
Ponnottu
Ofc. 1406 Brawns Ln.
Lauisville, 40207
502-893-0177
Res. 7302 Fax Harbar Rood
Praspect, 40059
502-228-0717
IM 5088 71

Childers, James
Dot
Ofc. Suite 520
Auduban Med. Ploza
Lauisville, 40217
502-635-5283
Res. 1227 Summit Ave.
Lauisville, 40204
502-451-3485
OBG 1602 54

Childers, Sara J.
Ofc. 260 E. Chestnut #1805
Chicaga, IL, 60611
312-787-8103
Res. 260 E. Chestnut #1805
Chicoga, IL, 60611
312-787-8103
SU 1612 81

Chism, Ronald G.
Nonnie Ja
Ofc. 5135 Dixie Hwy.
Lauisville, 40216
502-447-3242
Res. 510 Altagate Rd.
Lauisville, 40206
502-897-7228
FP 1602 64

Chmiel, Stanley S.
Coral A.
Ofc. 3 Auduban Plaza Dr.
Lauisville, 40217
502-635-7491
Res. 7501 Rackingham Rood
Prospect, 40059
502-228-2779
OTO 4806 69

Christian, Elbert G.
Mildred
Ofc. 3950 Kresge Way - #206
Lauisville, 40207
502-895-9404
Res. P.O. Box 405
Simpsanville, 40067
502-722-5475
IM 1602 54

Christopherson, Wm. M.
Koty
Ofc. HSC
Louisville, 40292
502-588-5341
Res. 2211 Cherakee Porkway
Lauisville, 40204
502-451-4679
PATH 1602 42

Chu, Ann Marie
Ofc. 529 S. Jockson
Louisville, 40202
502-588-5254
R 5908 81

Chuong, Tuong V.
Nghi Quyen
Ofc. 530 So. Jackson St.
Lauisville, 40202
502-588-5203
Res. 530 S. Jocksan St.
Louisville, 40202
502-244-0677
FP 5088 66

Church, Stephen H.
Diane
Ofc. 232 Breckinridge Ln.
Lauisville, 40207
502-896-8868
Res. 126 Morshall Drive
Louisville, 40207
502-895-2132
PD 1602 77

Churney, Alvin M.
Eileen
Ofc. 3957 Pork Dr.
Lauisville, 40216
502-448-7853
Res. 1009 Alto Circle
Louisville, 40205
PD 1602 53

Chutkow, Lee R.
Betty
Ofc. 2120 Newburg Rd. 210
Lauisville, 40205
502-451-4141
Res. 3019 Calaniol Hill Rd.
Lauisville, 40205
502-456-2595
P 502 54

Ciliberti, Angelo A.
Corale Anne
Ofc. Doctars Office Bldg. 410
Louisville, 40202
502-587-0521
Res. 168 Tatem Raod
Louisville, 40207
IM 3115 55

Clanton, Jerry N.
Jon
Ofc. 4001 Dutchmons Lane
Louisville, 40207
502-895-2313
Res. Overbraak Rd.
Lauisville, 40207
502-897-6196
PATH 4105 58

Clark, Orville S.
Babbie
Ofc. 612 Medical Tawers Na.
Louisville, 40202
502-584-8988
Res. 5839 Brittony Woods Circle
Lauisville, 40222
502-425-6070
ANES 301 53

Claugus, Clarence E.
Suzonne
Ofc. 414 Medical Tawers Bldg
Louisville, 40202
502-585-2490
Res. 2326 Volletto Lone
Lauisville, 40205
502-451-7317
SU 3441 43

Clay, Jr., Herbert L.
Kothryn
Ofc. 3950 Kresge Woy
Louisville, 40207
502-897-7107
Res. 214 Sequoyo Rd.
Louisville, 40207
502-895-3346
C 1602 39

Coe, Walter S.
Billie
Ofc. 3950 Kresge Woy 207
Lauisville, 40207
502-897-7107
Res. 3325 Notchez Lone
Lauisville, 40206
502-893-7398
IM 1602 43

Cohen, Norman K.
Ofc. 3372 Medicol Arts Bldg.
Lauisville, 40217
502-452-9521
Res. 5600 River Knolls Drive
Louisville, 40222
502-425-6706
A 1602 53

Cohen, Stuart P.
Bannie
Ofc. 273 Evongeline Ave.
Lauisville, 40214
502-361-2315
Res. 1609 Vivion Lane
Louisville, 40205
502-452-9718
GP 1602 60

Cohen, Burton J.
Dee
Ofc. Dactars' Office Bldg.
Lauisville, 40202
502-583-9425
Res. 7230 Heatherly Square
Lauisville, 40222
502-423-1533
OTO 1602 62

Colbert, Morgan R.
Cedelio
Ofc. 3373 Medicol Arts Bldg.
Lauisville, 40217
502-452-9514
Res. 3245 Crassbill Rd.
Louisville, 40213
502-634-1172
ORS 2405 38

Cole, Norman M.
Pot
Ofc. Suburbon Medical Ploza
Louisville, 40207
502-897-1549
Res. 3609 Glenview
Glenview, 40025
502-426-1443
PS 412 62

Coleman, Lee Alan
Ofc. 3729 Conoe Lone
Lauisville, 40207
502-588-5387
Res. 3729 Conae Lane
Lauisville, 40207
502-893-8298
P 1612 73

Collier, Henry S.
Peggy
Ofc. 1212 Costlewaad Ave.
Lauisville, 40204
Res. 1212 Costlewood Ave.
Louisville, 40204
502-451-7973
SU 1602 44

JEFFERSON

Collier, Ronald N.
Jonice
Ofc. 2957 Pork Dr.
Louisville, 40216
502-448-7853
Res. 9216 Morlboro Circle
Louisville, 40222
502-448-7853
PD 1602 65

Collier, Norman G.
Ellen
Ofc. 504 Country Ln.
Louisville, 40207
502-367-2263
Res. 504 Country Lane
Louisville, 40207
502-897-3993
OPH 1602 66

Collis, Stanley W.
Moria
Ofc. 206 Medical Towers Bldg.
Louisville, 40202
502-583-5015
Res. 3515 Woodside Rd.
Louisville, 40222
502-896-4057
ORS 1602 57

Comer, Milton
Goy
Ofc. 500 Doctors Office Bldg.
Louisville, 40202
502-583-7741
Res. 709 Done Holl Drive
Louisville, 40206
502-895-9401
SU 1602 54

Comer, J. William
Cloro
Ofc. 700 Lexington Ploce
Louisville, 40206
502-368-1131
Res. 700 Lexington Place
Louisville, 40206
502-897-7001
C 1602 74

Cona, Joseph P.
Ofc. 5803 Keewood Ct.
Louisville, 40222
Res. 5803 Keewood Court
Louisville, 40222
502-425-5523
GP 1602 36

Conley, Joe G.
Debbie
Ofc. Shopping Porks
Brondenburg, 40108
502-589-4665
Res. 220 Woodbine Lone
New Albony, IN, 47150
812-945-3333
R 1602 64

Conner, Eugene H.
Mory Lou
Ofc. 612 Med. Towers No.
Louisville, 40202
502-584-8988
Res. 5704 Apache Rd.
Louisville, 40207
502-895-0926
ANES 1901 45

Conway, Peter M.
Lorrie
Ofc. 1170 Eost Broodwoy
Louisville, 40204
502-587-7737
Res. 4110 Ormond Rood
Louisville, 40207
502-893-6110
SU 1602 76

Cook, Larry N.
Christine
Ofc. 601 So. Floyd, Suite 307
Louisville, 40202
502-583-3845
Res. 2011 Woodford Place
Louisville, 40205
502-459-4453
PD 1602 68

Cook, Christine L.
Lorry
Ofc. 601 So. Floyd St.
Louisville, 40202
502-583-3845
Res. 2011 Woodford Place
Louisville, 40205
502-459-4453
OBG 1602 71

Cook, III, Clinton C.
Royce
Ofc. 407 Childrens Foun. Bldg.
Louisville, 40202
502-587-0767
Res. 1 Arden Rd.
Glenview, 40025
502-426-7404
GYN 1602 65

Cooper, Robert G.
Ofc. 1901 Wickham Woy
Louisville, 40223
Res. 1901 Wickham Woy
Louisville, 40223
502-426-5586
PS 1602 52

Cooper, Samuel L.
Kathleen
Ofc. 470 Medicol Towers So.
Louisville, 40202
502-583-2164
Res. 8816 Preston Hwy.
Louisville, 40219
502-969-8649
OTO 1602 63

Copley, II, Robert W.
Beth
Ofc. 10407 Taylorsville Rd.
Louisville, 40299
502-267-5456
Res. 17416 Creek Run Road
Louisville, 40223
FP 1602 78

Coronel, Emmanuel R.
Felicidod
Ofc. 4602 Southern Pkwy.
Louisville, 40214
502-366-8679
Res. 1317 Tycoon Way
Louisville, 40213
502-456-5091
ANES 5088 44

Coronel, Abel J.
Fe
Ofc. SS Mory ond Eliz. Anes.
Louisville, 40215
502-366-8679
Res. 10202 Timberwood Circle
Louisville, 40223
502-244-9137
ANES 1602 76

Corwin, Hal Michael
Ofc. 350 Audubon Med. Plaza
Louisville, 40217
N 78

Cosio, Julio Elio
Mario
Ofc. 1206 Spring St.
Jeffersonville, IN, 47130
282-4351
Res. 104 Lyndon Lane
Louisville, 40222
502-426-5437
FP 6301 49

Costigan, Daniel G.
Mory
Ofc. 2418 Volley Visto Rd.
Louisville, 40205
Res. Louisville, 40205
502-451-4193
ORS 1602 39

Courtenay, Thomas A.
Ofc. 518 Medicol Towers
Louisville, 40202
502-584-0247
Res. Rt. 5, Box 214A
Shelbyville, 40056
502-722-5520
PD 3701 58

Cowan, John L.
Becky
Ofc. St. M. E. Hosp.
4400 Churchmon
Louisville, 40215
502-361-6304
Res. 1007 Alta Visto Road
Louisville, 40205
502-896-6610
R 1602 70

Cowley, Claire E.
Ofc. 1908 Duker
Louisville, 40205
502-587-2825
Res. 1908 Duker Ave.
Louisville, 40205
502-458-1733
PD 1602 76

Cox, David M.
Mildred B.
Ofc. 4010 Dupont Sq.
Louisville, 40207
Res. 123 Blankenbaker Lane
Louisville, 40207
502-895-5716
GP 1602 24

Cox, Rex A.
Loo K.
Ofc. 9822 Third St. Rd.
Louisville, 40272
502-935-0670
Res. 319 Fairmeode Rood
Louisville, 40207
502-897-5317
SU 1602 73

Cox, Robert D.
Ofc. 1809 Standard Ave.
Louisville, 4021Q
502-774-5711
Res. 2358 Grinsteod Dr. #43
Louisville, 40204
502-459-4346
PD 1907 49

Cox, Warren M.
Borboro
Ofc. 850 Borret Ave. #305
Louisville, 40204
502-589-2882
Res. 2320 Villoge Drive
Louisville, 40205
502-459-2847
P 3119 54

Coy, Fred E.
Emily
Ofc. 601 So. Floyd St., 805
Louisville, 40202
502-581-9447
Res. 1700 Spruce Lone
Louisville, 40207
502-895-1464
ORS 1602 50

Crabtree, Carson E.
Lois
Ofc. 2120 Newburg Rd.
Louisville, 40205
502-459-1383
Res. 13201 Cherry Tree Ct.
Prospect, 40059
502-228-0624
P 4106 49

Crabtree, Clovis A.
Tommye
Ofc. 2120 Newburg Rd., 209
Louisville, 40205
502-459-1383
Res. 6401 Deep Creek Dr.
Prospect, 40059
502-228-8817
P 4106 54

Crabtree, Garrett M.
Phyllis
Ofc. 850 Borret Ave.
Suite 100
Louisville, 40204
502-587-1680
Res. 8307 Point Court
Prospect, 40059
502-228-0779
D 1602 77

Crawford, Kenneth P.
Juonita
Ofc. L-12 Audubon Med. Plazo
Louisville, 40217
502-637-8700
Res. 35 Hill Rood
Louisville, 40204
502-451-0090
PD 1602 46

Creech, Jr., John L.
Hedy
Ofc. 801 Professional Plaza Bldg.
Louisville, 40204
502-584-5845
Res. 1734 Flemming Rd.
Louisville, 40205
502-452-9338
SU 1602 50

JEFFERSON

Cressman, Jr., Frederick
Elizabeth
Ofc. 3306 Brenner Poss
Louisville, 40222
502-636-7176
Res. 3306 Brenner Poss
Lauisville, 40222
502-426-2197
PATH 3709 61

Cronen, Michael R.
Elizobeth
Ofc. 4923 Sauthern Pkwy.
Lauisville, 40214
502-368-3461
Res. 4923 Southern Pkwy.
Louisville, 40214
502-368-3461
IM 1602 41

Cronen, Jr., Paul W.
Cherri
Ofc. 703 A. Green Rd.
Madison, IN, 47250
502-588-5442
Res. Rt. 3
Modison, IN, 47250
812-265-6896
SU 1602 76

Crutcher, Douglas C.
Leslie
Ofc. 1404 Hepburn Ave.
Louisville, 40204
Res. 1404 Hepburn Avenue
Lauisville, 40204
502-583-0499

Culley, Gregory A.
Ofc. UL Pediatrics
Lauisville, 40292
PD 601 65

Cummings, Norman A.
Elaine
Ofc. UL-HSC
Louisville, 40292
502-588-5223
Res. 7301 Fox Harbor Rood
Prospect, 40059
502-228-0245
IM 3108 59

Cummings, Patrick W.
Ofc. 5103 Moccasin Ct.
Lauisville, 40207
Res. 5103 Moccasin Ct.
Louisville, 40207
502-895-5358
PATH 1602 43

Cummings, III, Edward C.
Cheryl
Ofc. 2200 Dougloss Woods Ct.
Louisville, 40205
502-588-5201
Res. 2200 Dougloss Woods Ct.
Louisville, 40205
502-456-5879
FP 4202 77

Curran, Kevin L.
Ofc. UL Internol Medicine
Louisville, 40292
Res. Univ. of Lou./Inter. Med.
Lauisville, 40292
IM 1602 79

Curry, James W.
Judy
Ofc. 11504 Ridge Rd.
Louisville, 40223
502-897-7411
Res. 11504 Ridge Rood
Louisville, 40223
502-245-3142
R 1602 61

Cyran, Stanley J.
Mary Ellen
Ofc. GE Ca. Ap3
170 Appliance Pk
Louisville, 40225
502-452-4101
Res. 6706 Foxcroft Road
Prospect, 40059
502-228-8205
IM 3106 46

Dageforde, David A.
Emily
Ofc. 825 Barret Ave.
Louisville, 40204
502-584-2338
Res. 2015 Lowell Avenue
Louisville, 40205
502-451-8982
C 1320 74

Dame, Richard W.
Edith
Ofc. 1900 Bluegrass
St. Mory #300
Louisville, 40215
502-361-4428
Res. 524 Primrose Woy
Lauisville, 40206
502-895-2060
IM 3120 54

Daniel, Fielding W.
Nancy
Ofc. Suite 216
Highlond Praf. Plaza
Louisville, 40204
502-584-6665
Res. 529 Ridgewood Rood
Louisville, 40207
502-584-6665
OTO 1602 62

Datta, Robin
Ofc. 11003 Lonette Ct.
Lauisville, 40229
FP 5088 72

Dougherty, Karen H.
Ofc. 4884 Brownsbora Rd.
Louisville, 40207

Daus, Arthur T.
Ja-Ann
Ofc. 1169 Eastern Pkwy.
#1138
Louisville, 40217
502-451-3900
Res. 505 Altagote Rd.
Louisville, 40206
502-897-5730
P 1602 60

David, Douglas
Morgaret
Ofc. 2264 Medical Arts Bldg.
Lauisville, 40217
502-451-3678
Res. 2124 Murroy Ave.
Lauisville, 40205
502-451-2548
IM 1602 52

Davidson, Chester L.
Karen
Ofc. 4001 Dutchmans Ln. #6-C
Lauisville, 40207
502-897-3366
Res. 8201 Salford Woy
Louisville, 40222
502-423-0682
D 1602 64

Davis, Mary Long
George
Ofc. 3902 Old Brownsbaro Rd.
Louisville, 40207
Res. 3902 Brownsboro Rood
Lauisville, 40207
502-893-5986
IM 1602 43

Davis, James W.
Barboro
Ofc. 1169 Eastern Pkwy. 2243
Lauisville, 40217
502-451-4313
Res. 1604 Sylvan Way
Louisville, 40205
502-458-3496
N 2606 49

Davis, Lawrence A.
Lois
Ofc. Children's Hosp. - Rad.
Louisville, 40202
502-589-8220
Res. 28 Pawnee Trail
Louisville, 40207
502-896-6229
R 3101 42

Davis, Harold Q.
Cloro
Ofc. 2221 Medicol Arts Bldg.
Louisville, 40217
502-458-3235
Res. 5212 Tamerlone
Lauisville, 40207
502-897-3605
R 1602 52

Davis, Charles P.
Mary Ann
Ofc. 9617 Whippsmill Rd.
Louisville, 40222
502-425-1330
Res. 902 Bellewood Rd.
Anchorage, 40223
502-245-4943
FP 1602 56

Davis, Terry Lee
Betty
Ofc. 8916 Ayrshire Dr.
Louisville, 40222
502-589-9310
Res. 8916 Ayreshire
Lauisville, 40222
502-426-5481
FP 1602 64

Davis, Bruce C.
Ofc. 1401 E. Woshington St.
Louisville, 40204
Res. 105 Southview Sq. #59
Louisville, 40214
FP 5088 81

Davis, Jr., William G.
Cindi
Ofc. 4545 Bishap Ln.
Louisville, 40218
502-459-9700
Res. 5411 Apache Raad
Lauisville, 40207
502-895-9110
SU 1602 73

Dawson, Martha P.
Ofc. 1201 Heyburn Bldg.
Lauisville, 40202
502-585-3569
Res. 800 S. 4th Street
Louisville, 40208
502-583-5211
IM 1602 63

Day, Jr., Thomas G.
Ofc. 601 S. Floyd
Louisville, 40202
502-583-3845
Res. 2612 Woadside Drive
Louisville, 40207
502-895-0792
OBG

DeLong, Henry F.
Lois
Ofc. 4430 Crawford Ave.
Pleosure Ridge, 40258
502-935-5633
Res. 2300 Groy Fox Rd.
Louisville, 40205
502-458-1423
PD 1602 55

DeMunbrun, Donne O.
Trumon
Ofc. 4731 Rockford Plozo
Louisville, 40216
502-447-4791
Res. 3004 Beals Branch Drive
Lauisville, 40206
502-895-5682
FP 1602 54

DeMunbrun, Truman W.
Donne
Ofc. 4731 Rockfard Plaza
Louisville, 40216
502-447-4791
Res. 3004 Beols Bronch Drive
Louisville, 40206
502-895-5682
FP 1602 58

DeWeese, Bob M.
Angelo
Ofc. Suite 530
Audubon Medicol Plaza
Lauisville, 40217
502-636-9216
Res. 6206 Glenhill Rood
Lauisville, 40222
502-426-5565
SU 1602 61

JEFFERSON

Dean, Wynant
Helen
Ofc. 1629 Cawling
Lauisville, 40205
502-584-4536
Res. 1629 Cawling
Lauisville, 40205
502-451-7855
OPH 601 40

Dean, James
Judith
Ofc. 5135 Dixie Hwy.
Lauisville, 40216
502-447-3242
Res. 2823 Alta Vista Caurt
Louisville, 40206
502-896-2791
FP 1612 70

Dedman, Elizabeth B.
Tam
Ofc. 132 Aspen Dr.
Horradsburg, 40330
Res. 2810 Rainbaw Drive
Lauisville, 40206
502-893-7076
PD 1602 69

Dee, Michael W.
Ofc. 314 Foirmeode Rd.
Lauisville, 40207
EM 1320 79

Denham, Ralph M.
Virginio
Ofc. 825 Barret Ave.
Louisville, 40204
502-584-2338
Res. 1610 Dundee Way
Lauisville, 40205
502-452-9963
C 4105 42

Dent, Paul L.
Willodo R.
Ofc. 4810 Upper River Rd.
Lauisville, 40222
Res. 4810 Upper River Rd.
Lauisville, 40222
502-896-8932
SU 4504 31

Denton, Clarence E.
Betty
Ofc. 4150 W. Morket St.
Louisville, 40212
502-776-7719
Res. 807 Storlite Drive
Lauisville, 40207
502-896-1345
FP 1602 46

Denton, Sandra C.
Ofc. Boptist East Hasp.
Emerg. Rm.
Lauisville, 40207
502-897-8141
Res. 626 Combridge Statian Rd.
Lauisville, 40223
502-245-6927
EM 4106 71

Dhanjal, Surjeet S.
Ofc. 1506 Thackeroy Dr.
Lauisville, 40205
502-245-0228
Res. 1506 Thockeroy Dr.
Louisville, 40205
502-459-1125
PD 7034 54

DiOrio, Victor J.
Caral Jeon
Ofc. Nartan-Children's Hasp.
Lauisville, 40202
502-562-7600
Res. 13820 Toylarsville Rd.
Louisville, 40299
502-267-1918
R 1612 65

Diamond, Harvey M.
Ofc. 4001 Dutchmans Lane
Lauisville, 40207
EM 1602 74

Dick, Marcus
Ofc. 323 E. Chestnut St.
Lauisville, 40202
502-588-5851
Res. 6303 Shodowwaod Dr.
Praspect, 40059
502-228-0557
ANES 3408 70

Dickinson, Jr., Grady L.
Sharan
Ofc. P.O. Box 14126
Louisville, 40214
502-361-5322
Res. 4803 Sauthern Pkwy.
Lauisville, 40214
502-368-6690
ANES 1602 60

Dickstein, Herbert
Leoh
Ofc. 1313 Anthany Place
Lauisville, 40204
502-587-1161
Res. 3006 Dunraven Drive
Lauisville, 40222
502-426-5871
PATH 5080 60

Dickstein, Leah J.
Herbert
Ofc. UL, HSC,
Stu. Affoirs 214
Louisville, 40292
502-588-6480
Res. 3006 Dunraven Dr.
Lauisville, 40222
502-426-5871
P 1602 70

Diebold, Donald G.
Nancy
Ofc. 1800 Cherokee Rd.
Lauisville, 40205
502-584-1878
Res. 1800 Cherakee Rd.
Louisville, 40205
502-451-5563
FP 1602 56

Diebold, John C.
Laura
Ofc. 402 Heyburn Bldg.
Lauisville, 40202
502-585-4391
Res. 122 Blonkenboker Ln.
Lauisville, 40207
502-897-9174
R 1502 70

Dienes, James A.
Sheilo
Ofc. 9822 Third St. Rd.
Louisville, 40272
502-933-0050
Res. 908 Cannons Lone
Louisville, 40207
IM 1602 76

Dill, Daniel R.
Judith
Ofc. 4426 Greenbriar Rd.
Lauisville, 40207
502-588-5201
Res. 4426 Greenbrior Rd.
Louisville, 40207
502-893-8904
FP 1602 72

Dobbs, Charles E.
Nan
Ofc. 850 Barret Ave. #301
Lauisville, 40204
502-583-5318
Res. 2405 Branning Rd.
Lauisville, 40222
502-426-1916
H 3207 60

Dockery, Robert W.
Vera
Ofc. 1918 W. Braadway
Lauisville, 40203
502-778-7122
Res. 1117 Southwestern Pkwy.
Louisville, 40211
502-772-2269
OPH 4107 40

Donnelly, Patricia J.
Ofc. Lauisville VA Hosp.
Lauisville, 40207
502-895-3401
Res. 517 Ridgewaad Rd.
Lauisville, 40207
502-896-8605
IM 1602 80

Donovan, Arthur J.
Carol
Ofc. P.O. Bax 91052
Lauisville, 40291
502-897-2531
Res. 905 Rugby Ploce
Lauisville, 40222
502-425-1298
OBG 1602 65

Dorman, David W.
Marcio
Ofc. 3950 Kresge Way
Lauisville, 40207
502-893-3683
Res. 2113 Starmont Rd.
Lauisville, 40207
502-897-2122
OTO 3120 59

Dorton, Jr., David H.
Betty
Ofc. 2343 Medical Arts Bldg.
Lauisville, 40217
502-451-4003
Res. 5612 Caoch Gate Wynde
Lauisville, 40207
502-893-6799
OPH 1602 43

Doughty, Richard E.
Claro Marie
Ofc. 2407 Dauglass Blvd.
Lauisville, 40205
502-452-2146
Res. 2407 Dauglass Blvd.
Lauisville, 40205
502-452-2146
SU 3441 26

Douglas, James B.
Morjarie
Ofc. 250 Medical Towers S.
Louisville, 40202
502-585-4391
Res. 507 Ridgewaad Rd.
Lauisville, 40207
502-896-9508
R 2101 40

Douglas, Craig H.
Pamela
Ofc. Suburbon Medicol Plozo-4E
Lauisville, 40207
502-897-9801
Res. 609 Moryhill Ln.
Lauisville, 40207
502-893-0875
OPH 1602 73

Dowdell, Richard W.
Jonice
Ofc. 1900 Bluegrass
St. Morys #300
Louisville, 40215
502-361-4428
Res. 13996 Paplar Lone
Lauisville, 40299
502-245-0582
IM 1602 63

Dowden, C. William
Morion E.
Ofc. 623 Cachron Hill Rd.
Lauisville, 40206
Res. 623 Cachran Hill Rd.
Lauisville, 40206
502-895-6238
ADM 1602 37

Doyle, George F.
Morie
Ofc. 850 Borret Ave. #305
Lauisville, 40204
502-589-2123
Res. 2553 Trevilian Way
Louisville, 40205
P 2101 45

Doyle, John H.
Martho
Ofc. L-12 Auduban Medical
Plazo
Louisville, 40217
502-637-8700
Res. 52 Hill Raod
Lauisville, 40204
502-451-7222
PD 1602 53

JEFFERSON

Drasin, George F.
Dena
Ofc. Jewish Hasp.-Rodialagy
Louisville, 40202
502-587-4231
Res. 4911 Crafton Rd.
Lauisville, 40207
502-895-0240
R 4805 67

Draus, John M.
Mory Sue
Ofc. 8900 Cedor Creek Rd.
Lauisville, 40291
502-282-4376
Res. 8900 Cedor Creek Raod
Lauisville, 40291
502-239-4554
SU

Dreszer, Moises
Lily
Ofc. 1533 Sylvan Woy
Lauisville, 40205
502-964-2458
Res. 1533 Sylvon Way
Louisville, 40205
502-456-1042
PD 5088 69

Drye, David D.
Ofc. 800 Sa. 4th St.
Lauisville, 40203
502-587-1975
Res. 800 S. 4th Street
Lauisville, 40203
502-587-1975
FP 1602 53

Dunbar, Elmer E.
Delares E.
Ofc. Medicol Arts Bldg.
Lauisville, 40217
502-451-1448
Res. 6402 Lime Ridge Ct.
Lauisville, 40222
502-426-5298
ANES 1602 78

Duncan, Charles H.
Julio
Ofc. 2430 Crass Hill Rd.
Lauisville, 40206
Res. 2430 Crosshill Raad
Lauisville, 40206
502-895-5257
IM 3440 40

Duncan, Anthony K.
Elaine
Ofc. St. Anthony's Hasp.
Radialagy
Lauisville, 40204
502-587-1161
Res. 6214 Innes Troce
Louisville, 40222
R 1602 76

Duque, Fausto
Eldo
Ofc. 207 Sporks Ave.
Jeffersonville, IN, 47130
502-282-2072
Res. 328 Mockingbird Hill Rd.
Louisville, 40207
502-895-6770
ANES

Duran, Daniel A.
Lucy
Ofc. 9822 Old Third St. Rd.
Suite 303
Lauisville, 40272
502-935-8061
Res. 213 Burleigh Ct.
Louisville, 40223
502-245-3057
ORS 1201 74

Durham, William C.
Ginny
Ofc. 3950 Kresge Way #307
Lauisville, 40207
502-896-4495
Res. 406 Wintan Lane
Louisville, 40206
502-893-2830
OBG 1602 44

Dwyer, Jr., George F.
Bee
Ofc. 3427 Medical Arts Bldg.
Lauisville, 40217
502-459-4545
Res. 59 Sterling Rd.
Louisville, 40220
502-491-6897
SU 1602 52

Dyer, Robert S.
Borboro
Ofc. 3310 Medicol Arts Bldg.
Lauisville, 40217
502-456-1480
Res. 1013 Alta Circle
Louisville, 40205
502-893-3081
IM 1602 40

Dzenitis, Andrievs J.
Alice
Ofc. 568 Medicol Towers So.
Louisville, 40202
502-584-4121
Res. 591 Sunset Rd.
Lauisville, 40206
502-895-9130
NS 1320 60

Eckerle, John E.
Morgoret
Ofc. 2137 Tyler Lane
Lauisville, 40205
502-895-8839
Res. 2137 Tyler Lone
Louisville, 40205
502-451-1028
FP 1602 58

Edwards, Darwin
Danna
Ofc. P.O. Bax 315
Lauisville, 40202
502-585-2339
Res. 9208 Whitegote Ct.
Louisville, 40222
426-1580
PATH 1612 72

Eggers, Ernest A.
Sally
Ofc. 4130 Dutchmons Ln.
Louisville, 40207
502-897-1794
Res. 3719 Hillsdole Rd.
Lauisville, 40222
502-425-8498
ORS 1602 64

Ehsan, Mohsen
Brenda K.
Ofc. UL Schaal af Medicine
Lauisville, 40292
812-948-5010
Res. 3021 Julion Drive
New Albany, IN, 47150
812-945-4785
IM 7102 69

Eiferman, Richard A.
Siddy
Ofc. 301 E. Muhommad Ali Blvd
Lauisville, 40202
502-588-5466
Res. 3106 Murray Hill Pike
Lauisville, 40222
502-425-3316
OPH 4806 72

Elam, Sandra M.
James Simrall
Ofc. 5406 Novoja Rd.
Lauisville, 40207
502-895-3401
Res. 5406 Novoja Raod
Louisville, 40207
502-896-6703
P 1202 68

Elbl, Francisco
Cormen
Ofc. 220 E. Chestnut St.
Louisville, 40202
502-585-4802
Res. 6414 Limeridge Pl.
Louisville, 40222
502-426-6201
PD 5101 62

Eldridge, John C.
Anne
Ofc. 1816 Princetan Dr.
Lauisville, 40205
502-588-7655
Res. 1816 Princetan Drive
Lauisville, 40205
502-456-6921
PD 1602 80

Elliott, Marvin M.
Ello Deon
Ofc. 936 Audubon Pkwy.
Louisville, 40213
Res. 936 Auduban Pkwy.
Louisville, 40213
502-636-3192
FP 1602 29

Elliott, Robert B.
B. J.
Ofc. Kentucky Baptist Hasp.
Lauisville, 40204
502-897-8121
Res. 11308 Owl Creek Lone
Lauisville, 40223
502-245-9759
R 1602 65

Ellis, Rudy J.
Ruth Ann
Ofc. Medicol Towers So. #364
Louisville, 40202
502-584-5547
Res. 2815 Roinbaw Dr.
Louisville, 40206
502-895-3431
ORS 1602 43

Ellis, Robert E.
Dione
Ofc. 205 Moser Rd.
Louisville, 40243
502-245-6612
Res. 10908 Allaway Ct.
Lauisville, 40243
502-245-0855
IM 1602 76

Enright, Dennis W.
Jane
Ofc. 3606½ Klandike Ln.
Lauisville, 40218
502-451-0707
Res. 407 Flat Rack Rd.
Louisville, 40223
502-451-0707
GP 3440 68

Eskind, Harold G.
Rosolie
Ofc. 1320 Bardstawn Rd.
Lauisville, 40204
502-452-1640
Res. 2306 Douglass Blvd.
Lauisville, 40205
502-451-5371
GP 1602 44

Estanislao, Amado B.
Jonet
Ofc. 1612 Dowkins Rd.
Bax 67
LoGrange, 40031
502-222-7161
Res. 10606 Bracken Bronch Ct.
Louisville, 40223
502-245-2859
P 8506 55

Eubanks, Jr., Samuel G.
Hozel
Ofc. 601 Sa. Flayd
Suite 503
Lauisville, 40202
502-585-5325
Res. 8310 Croydon Circle
Lauisville, 40222
502-426-7095
OBG 4107 68

Evans, Donald L.
Millicent
Ofc. 5135 Dixie Hwy.
Louisville, 40216
502-448-4722
Res. 215 Whippaarwill Dr.
Louisville, 40222
502-425-9209
R 1602 67

JEFFERSON

Fadel, Ronald J.
Melanie
Ofc. 1900 Bluegrass Ave.
Louisville, 40215
502-367-1744
Res. 8900 Cromwell Hill Rd.
Louisville, 40222
502-425-5098
ORS 3440 67

Falls, Ronald E.
Gene
Ofc. 3204 Woodside Rd.
Louisville, 40222
502-636-7111
Res. 3204 Woodside Rd.
Louisville, 40222
502-425-8255
R 1602 64

Farmer, Kenneth M.
Jonet
Ofc. 4400 Churchman Ave.
Louisville, 40215
502-896-2890
Res. 17718 Popedale Rd.
Louisville, 40223
502-245-5452
EM 1602 72

Farmer, John M.
Solly
Ofc. Suite 1-D
Suburban Medicol Plozo
Louisville, 40207
502-893-3651
Res. 528 Gorden Drive
Louisville, 40206
502-458-6093
OBG 1602 76

Farnsley, Wesley G.
Gail
Ofc. P.O. Box 17099
Louisville, 40217
502-636-7251
Res. 5803 Round Hill Rd.
Louisville, 40222
502-425-0025
R 1602 53

Faurest, Michael
Ann
Ofc. 6C Suburbon Medicol Plozo
Louisville, 40207
502-897-3366
Res. 5413 Pueblo Road
Louisville, 40207
502-895-0832
D 1612 72

Faurest, Jr., John O.
Mitzie
Ofc. 5135 Dixie Hwy.
Louisville, 40216
502-447-3242
Res. 8313 Salford Way
Louisville, 40222
502-426-5102
FP 1612 70

Feitelson, Philip J.
Anne
Ofc. 6014 Innes Troce
Louisville, 40222
502-585-4857
Res. 6014 Innes Trace
Louisville, 40222
502-426-6211
IM 1602 66

Fellows, Richard A.
Bonnie
Ofc. 226 E. Chestnut St.
Louisville, 40202
502-589-8220
Res. 12400 Nossou Ln.
Louisville, 40243
502-245-1605
R 2101 69

Ferris, Fred Z.
Keltie
Ofc. 224 E. Broadwoy
Louisville, 40202
502-452-1563
Res. 2322 Village Drive
Louisville, 40205
502-451-0920
NEP 5909 66

Fine, Lewis
Ofc. 111 Fairmeode Rd.
Louisville, 40207
502-895-8485
Res. 2202 Corolina Avenue
Louisville, 40205
502-454-0811
D 1602 35

Fink, Stuart A.
Ofc. 4213 Cane Run Rd.
Louisville, 40216
502-447-8188
Res. 511 Eline Avenue
Louisville, 40207
502-896-0590
FP 1602 62

Fischer, Kerwin Armand
Dorothy
Ofc. 601 S. Floyd St.
Louisville, 40202
502-585-4376
Res. 145 Westwind Rood
Louisville, 40207
502-896-6087
ORS 1602 26

Fischer, Karen F.
Ofc. 1169 Eastern Pkwy. 3323
Louisville, 40217
502-454-5767
Res. 15903 Shelbyville Rood
Louisville, 40223
502-245-1616
P 1612 68

Fitzgerald, Barbara A.
Robert E. Olive
Ofc. P.O. Box 35070
Louisville, 40232
502-562-8853
Res. 120 Cheyenne Rood
Shelbyville, 40065
502-633-0239
P 4105 75

Fitzpatrick, James F.
Alice Hope
Ofc. 1900 Bluegrass
Medicol Plozo 108
Louisville, 40215
502-363-3547
Res. 69 Worrior Road
Louisville, 40207
502-897-0512
IM 1602 66

Flautt, Jr., James Robert
Louise
Ofc. 3025 Modelle Rd.
Louisville, 40206
502-897-7401
Res. 3025 Modelle Ave.
Louisville, 40206
502-896-1115
ANES 4106 44

Fleitz, Paul A.
Eliz
Ofc. 612 Medicol Towers No.
Louisville, 40202
502-584-8988
Res. 1720 Casselberry Rd.
Louisville, 40205
502-451-0790
ANES 1602 61

Fliegelman, Maurice T.
Maud
Ofc. 3713 Hillsdale Rd.
Louisville, 40222
Res. 3713 Hillsdole Rood
Louisville, 40222
502-426-2153
D 3701 36

Flint, Jr., Lewis M.
Ofc. U of L
Louisville, 40202
502-584-2139
Res. 8011 Woodcreek Ct.
Louisville, 40222
502-426-7207
SU 3207 65

Florman, Larry D.
Phyllis
Ofc. 520 Doctors Office Bldg.
Louisville, 40202
502-584-2139
Res. 1902 Tyler Lone
Louisville, 40205
502-459-1729
PS 5503 69

Flowers, Jeremiah T.
Margoret
Ofc. 224 E. Broodwoy
Suite 400
Louisville, 40202
502-587-8402
Res. 90 Warrior Road
Louisville, 40207
502-895-6750
OPH 1602 58

Flowers, Nancy C.
Leo G. Horan
Ofc. UL School of Med.
Louisville, 40292
502-589-4668
Res. 2300 Juniper Hill Ct.
Louisville, 40206
502-897-3418
C 4106 58

Flynn, Michael B.
Ofc. 505 Childrens Hosp.
Fdn. Bldg.
Louisville, 40202
502-585-4219
Res. 627 Upland Rd.
Louisville, 40206
502-893-2779
SU 7301 62

Ford, Norwood K.
Ruth
Ofc. 6902 U.S. Hwy. 42
Louisville, 40222
502-367-1744
Res. 6902 Highwoy 42
Louisville, 40222
502-228-3113
ORS 1602 58

Forrester, Alex M.
Juliette
Ofc. 3950 Kresge Woy, 402
Louisville, 40207
502-893-3683
Res. 3716 Fairwoy Lone
Louisville, 40207
502-895-7451
OTO 1602 35

Foshee, Clyde H.
Isobel
Ofc. 3304 Mt. Shosto Woy
Louisville, 40222
Res. 3304 Mt. Shosto Woy
Louisville, 40222
502-426-1555
SU 2001 30

Foster, Will S.
Ginny
Ofc. 100 E. Liberty St. 307
Louisville, 40202
Res. Box 22
Glenview, 40025
502-893-9261
ANES 1602 69

Fowler, Jeffrey P.
Sondro
Ofc. 3450 Woodside Rd.
Louisville, 40222
502-585-4321
Res. 3450 Woodside Rd.
Louisville, 40222
C 1320 67

Fowler, Jr., Joseph F.
Beth A.
Ofc. 1862 Overlook Terroce
Louisville, 40205
502-456-2817
D 1602 79

Fox, Gary
Esther
Ofc. 3 Audubon Plaza Dr. #350
Louisville, 40217
502-583-0696
Res. 3113 Runnymede Court
Louisville, 40222
502-583-0696
N 1602 61

Franco, Sofia M.
Ofc. 323 E. Chestnut St.
Louisville, 40202
502-588-5589
Res. 217 Beckley Woods Dr.
Louisville, 40223
502-245-1316
PD 8507 62

Franks, Darrell
Ofc. 325 West Ormsby
Louisville, 40203
502-634-4176
Res. 741 Middle Woy
Louisville, 40206
502-893-3815
P 1502 70

JEFFERSON

Franz, Mary V.
Edwin
Ofc. 6201 Glen Hill Rd.
Louisville, 40222
Res. 6201 Glen Hill Raad
Lauisville, 40222
502-425-6025
PH 1602 35

Frasher, E. Kenneth
Lou
Ofc. 5021 Paplar Level Rd.
Lauisville, 40219
502-969-6971
Res. 1007 Girard Drive
Lauisville, 40222
502-425-2159
FP 1602 55

Freer, James A.
Susan
Ofc. 2012 Craghon Hause Dr.
Louisville, 40207
502-636-7225
Res. 2012 Cragan Hause Dr.
Lauisville, 40207
502-893-9638
EM 1612 73

Fruehwald, Edwin J.
Ja
Ofc. 6601 Old Heody Rd.
Jeffersantawn, 40299
502-368-1415
Res. 6601 Old Heady Rd.
Louisville, 40299
502-267-7014
GP 1602 46

Fuchs, Gary L.
Jill
Ofc. 250 E. Liberty St. #301
Louisville, 40202
502-585-4321
Res. 7204 Shefford Lone
Lauisville, 40222
C 1602 73

Fuller, J. Luther
Betty
Ofc. 605 Cressbraak Dr.
Lauisville, 40206
502-366-9511
Res. 605 Cressbraak Dr.
Lauisville, 40206
502-895-7915
SU 1602 38

Gaba, Charles R.
Betty Ja
Ofc. 1169 Eostern Pkwy.
Suite 3451
Lauisville, 40217
502-459-5380
Res. 1704 Stone Gate Rood
Louisville, 40223
502-245-6224
D 1602 72

Gaines, Jr., Frank M.
Jerry
Ofc. 2120 Newburg Rd.
Louisville, 40205
502-456-1980
Res. 16 Howthorne Hill
Louisville, 40204
502-451-2058
P 1602 41

Galla, Patrick P.
Muriel
Ofc. 2120 Newburg Rd.
Suite 400
Lauisville, 40205
502-451-5191
Res. 1504 Thackeray Drive
Lauisville, 40205
502-459-6098
P 802 54

Gamboa, Renee L.
Ranulfa
Ofc. 1313 Lyndan Ln.
Lauisville, 40222
502-426-1160
Res. 2304 Cove Spring Pl.
Lauisville, 40223
502-244-1049
FP 8506 57

Gamel, John W.
Ofc. 301 E. Muhammod Ali Blvd.
Louisville, 40202
502-588-5466
Res. 605 Woitfield Place
Lauisville, 40206
502-893-8553
OPH 411 71

Garcia, Daniel P.
Rito
Ofc. 1714 Dundee Way
Louisville, 40205
502-896-8868
Res. 1714 Dundee Woy
Lauisville, 40205
PD 1602 74

Gardner, Hoyt D.
Rase
Ofc. 304 Baptist East
Doctors Bldg.
Louisville, 40207
502-895-3462
Res. 2707 Lamont Raod
Louisville, 40205
502-458-1229
SU 1602 50

Gardner, Francis T.
Dione
Ofc. 3111 Runnymeode Ct.
Louisville, 40222
502-935-0670
Res. 3111 Runnymede Ct.
Louisville, 40222
502-426-3048
SU 1602 68

Gardner, Richard
Ofc. 2109 Green Volley Rd.
New Albony, IN, 47150
502-948-2246
Res. 3414 Ashwaod
New Albony, IN, 47150
502-944-2171
PUD 1320 71

Garfinkel, Lester S.
Corolyn Jay
Ofc. 5901 Burlington Ave.
Lauisville, 40222
502-426-2499
Res. 5901 Burlingtan Ave.
Louisville, 40222
502-426-7499
IM 4604 59

Garon, Max L.
Layce
Ofc. 3038 Eostland Blvd.
F-110
Clearwater, FL, 33519
Res. 3038 Eastlond Blvd.
F-110
Clearwater, FL, 33519
813-797-4893
IM 1602 29

Garretson, Henry D.
Morianna
Ofc. UL Surgery
Lauisville, 40292
502-583-1697
Res. 517 Tiffany Lane
Louisville, 40207
502-896-8270
NS 2001 54

Garrison, Richard N.
Kotherine
Ofc. 3200 Cross Bill Rd.
Lauisville, 40213
502-583-8303
Res. 3200 Crass Bill Rd.
Lauisville, 40213
502-637-8837
SU 1005 72

Garrison, Katherine P.
Richord
Ofc. 3 Audubon Plazo Dr.
#540
Louisville, 40217
502-636-5132
Res. 3200 Cross Bill Rd.
Louisville, 40213
502-637-8837
OBG 1005 72

Garvin, Ronald M.
Ofc. 600 Federol Ploce
Louisville, 40222
FP 1602 65

Gataky, George J.
Mory
Ofc. 630 Auduban Med. Plozo
Lauisville, 40217
502-582-5921
Res. 1009 Doric Circle
Lauisville, 40205
502-426-8430
D 1403 62

Gauri, Kamla
Lol
Ofc. 601 Sauth Flayd
Louisville, 40202
502-583-3131
Res. 719 Fehr Rood
Louisville, 40206
502-895-8105
OBG 7021 58

Gearhart, John P.
Ofc. 2828 1st Ave.
305 Highlown
Huntington, WV, 25702
304-525-3711
Res. 348 Locust St.
Hungtington, WV, 25705
304-523-5599
U 1602 75

Gedmark, John I.
Jon
Ofc. P.O. Bax 6641
Louisville, 40206
Res. 2632 Lindsay Avenue
Louisville, 40206
502-897-3775
PRM 5088 73

Geeslin, Lois F.
Roger
Ofc. P.O. Bax 17264
Louisville, 40217
502-636-7473
Res. 1119 Red Fax Raad
Louisville, 40205
502-897-2396
R 1602 69

Geevarghese, Kunnathu P.
Chinna
Ofc. 200 E. Chestnut St.
Lauisville, 40202
502-583-0909
Res. 8314 Croydan Circle
Lauisville, 40222
502-425-0484
ANES 7035 59

George, Anthony
Judith
Ofc. 1170 Eost Braadway
Lauisville, 40204
502-587-7737
Res. 11600 Valley View Rd.
Louisville, 40223
502-245-2244
SU 1602 65

Germano, Jr., Roy P.
Ofc. Univ. Hasp. EM
Louisville, 40202
502-588-6993
Res. 3908 Ash Ridge Dr.
Louisville, 40222
EM 1602 77

Gettelfinger, Wilfrid
Alice
Ofc. 9 Lincaln Run Rd.
Louisville, 40223
Res. 9 Lincaln Run Raod
Louisville, 40223
IM 1602 34

Gettelfinger, Ralph A.
Betty
Ofc. 1147 Medical Arts Bldg.
Lauisville, 40217
502-451-0388
Res. 2405 Volley Visto
Louisville, 40205
502-451-3866
OPH 1320 36

Ghazi, Cyrus
Freshteh
Ofc. Suburbon Hosp.
Lauisville, 40207
502-228-0238
Res. 6401 Shadaw Wood Dr.
Prospect, 40059
502-228-3703
PATH 7102 66

JEFFERSON

Ghazi, Darius
Mariam
Ofc. 850 Barret Ave.
Suite 201
Louisville, 40204
502-585-1176
Res. 194 Westwind Rd.
Louisville, 40207
502-897-3570
ORS 7102 62

Ghazi, Freidoon
Ofc. Dept. af Med.
Ambulance Care Bldg.
Louisville, 40202
Res. 7104 Fax Harbar
Praspect, 40059
502-228-3320
IM 5088 77

Giannini, J. Thomas
Eula
Ofc. 3 E Suburban Medical Plaza
Louisville, 40207
502-895-5466
Res. 1702 Spruce Lane
Louisville, 40207
502-895-8345
PS 1602 38

Gibson, Elvin T.
Susan
Ofc. 234 Medical Towers S.
Louisville, 40202
502-584-1961
Res. 5201 Curry Creek Rd.
Crestwaad, 40014
502-241-4592
OBG 412 62

Giesel, Louis O.
Narma
Ofc. 4020 Taylarsville Rd.
Louisville, 40220
502-456-6190
Res. 196 Westwind Rd.
Louisville, 40207
502-895-0039
PD 1602 50

Gillespie, William H.
Peggy
Ofc. 1107 Rastrevar Circle
Louisville, 40205
502-585-4262
Res. 1107 Rastrevar Cr.
Louisville, 40205
502-895-6585
D 1602 55

Gillim, Douglas L.
Mary Ja
Ofc. Medical Towers Sa.
Louisville, 40202
502-583-8341
Res. 4021 Waadstane Drive
Louisville, 40220
502-228-1348
OBG 2101 50

Girardet, Roland E.
Janine
Ofc. 718 Medical Towers Bldg.
Louisville, 40202
502-584-6413
Res. 3121 Runnymeade Ct.
Louisville, 40222
502-426-8050
TS 9003 58

Gladstein, Mark O.
Ralla
Ofc. 1003 Dactars Office Bldg.
Louisville, 40202
502-584-5116
Res. 5606 Walf Pen Trace
Praspect, 40059
502-228-4243
ORS 1602 66

Glaser, Nicholas W.
Ida
Ofc. Lyn Medical Center
8013 LaGrange #5
Louisville, 40222
502-426-2548
Res. 1508 Ocala Raad
Louisville, 40222
502-426-2548
PD 1602 58

Glazer, Norman
Genie
Ofc. 2700 Bardstawn Rd.
Louisville, 40205
502-459-1100
Res. 804 Samaa Way
Louisville, 40207
502-895-7111
IM 1602 52

Gleason, John R.
Marian
Ofc. 801 Barret Ave.
Louisville, 40204
502-584-2421
Res. 1503 Sylvan Ct.
Louisville, 40205
502-459-2478
OPH 1602 57

Gleis, Linda H.
Gregary E.
Ofc. 220 Abraham Flexner Way
Louisville, 40202
502-584-3376
Res. 2421 Meadaw Rd.
Louisville, 40205
502-459-6629
PRM 1602 78

Goddy, Leonard A.
Lynn
Ofc. 801 Barret Ave.
Louisville, 40204
502-584-4206
Res. 1212 Park Hills Dr.
Louisville, 40207
502-895-0292
ORS 1602 58

Goebel, Ronald G.
Peggy
Ofc. 903 Evergreen
Ancharage, 40223
502-897-7411
Res. 903 Evergreen Raad
Louisville, 40223
502-245-0371
R 1602 64

Goldberg, Harry
Virginia
Ofc. 1110 Chamberlain Hill Rd.
#229
Louisville, 40207
Res. 1110 Chamberlain Hill Rd.
Louisville, 40207
502-896-9596
ORS 1602 20

Goldberg, Lawrence G.
Ofc. Suite 510
Auduban Medical Plaza
Louisville, 40217
502-636-3521
Res. 3550 Glenview Avenue
Glenview, 40025
502-426-2701
TS 1602 62

Golde, Harry R.
Mae
Ofc. 200 Diplamat Pkwy, #834
Hallandale, FL, 33009
Res. 200 Diplamat Pkwy, #834
Hallandale, FL, 33009
GP 1602 34

Goldin, Albert G.
Anita
Ofc. 564 Medical Towers Sa.
Louisville, 40202
502-582-1143
Res. 3218 Beals Branch Raad
Louisville, 40206
502-895-5996
IM 1602 46

Goldman, Martyn A.
Tani
Ofc. Dactars Office Bldg.
Louisville, 40202
502-584-5116
Res. 2203 Ardsley Road
Louisville, 40207
502-895-5292
ORS 1206 54

Goldsborough, John N.
Margaret
Ofc. Baptist East Dactars Bldg.
Louisville, 40207
502-895-3441
Res. 2307 Cherakee Pkwy.
Louisville, 40204
502-451-4134
IM 1602 53

Goldstein, Joseph L.
Sylvia
Ofc. 3443 Medical Arts Bldg.
Louisville, 40217
Res. 332 Stanehenge, 40207
502-897-6160
P 1602 33

Goldstein, Isadore
Rase
Ofc. 107 E. Oak St.
Louisville, 40203
502-584-5572
Res. 1844 Dauglass Blvd.
Louisville, 40205
502-454-4952
FP 1001 38

Goldstein, David H.
Nicale
Ofc. 2403 Chatteswarth Ct.
Louisville, 40222
502-587-9660
Res. 2403 Chatteswarth Ct.
Louisville, 40222
502-426-8336
NEP 3701 70

Goodin, Robert R.
Caral Ann
Ofc. 3012 Lightheart Rd.
Louisville, 40222
502-584-2338
Res. 3012 Lightheart Rd.
Louisville, 40222
502-426-5017
C 1602 64

Gopinath, D. K.
Amita
Ofc. 6540 Outer Laap
Louisville, 40228
502-964-6777
Res. 3017 Piedmont Drive
Louisville, 40205
502-451-4092
PD 5088 68

Gordinier, John D.
Ruby Stane
Ofc. 561 Garden Dr.
Louisville, 40206
502-895-3703
Res. 561 Garden Drive
Louisville, 40206
502-895-3703
OBG 1701 35

Gordon, Samuel S.
Saphie
Ofc. 233 E. Gray St.
Louisville, 40202
502-583-3376
Res. 609 Riverwaad Place
Louisville, 40207
502-896-6388
OBG 1602 32

Gordon, Abraham M.
Ofc. 450 Medical Towers Sa.
Louisville, 40202
502-585-4562
Res. 85 Wampum Raad
Louisville, 40207
502-895-8178
IM 1602 38

Gordon, Armond T.
Ruth
Ofc. 746 Lincaln Federal Bldg.
Louisville, 40202
502-587-8493
Res. 13 Chamberry Circle
Louisville, 40207
502-895-5616
C 1602 45

Gossman, G. William
Judith
Ofc. 1220 Spring St.
Jeffersanville, IN, 47130
502-282-8494
Res. 707 Cherakee Waads Rd.
Louisville, 40206
ORS

Gott, Jr., John R.
Marjarie
Ofc. 136 Indian Hills Trail
Louisville, 40207
Res. 136 Indian Hills Trail
Louisville, 40207
502-893-5588
IM 1602 29

JEFFERSON

Gould, Richard A.
Soro F.
Ofc. 4130 Dutchmons Ln.
Suite 402
Louisville, 40207
502-896-2342
Res. 6408 Lime Ridge Ploce
Louisville, 40222
502-425-1116
U 1612 76

Graham, III, S. Lyle
Cothy
Ofc. 224 E. Broodwoy #700
Louisville, 40202
502-587-0915
Res. 4802 Blonton Rood
Louisville, 40222
PUD 3901 71

Grantham, Everett G.
Cormel
Ofc. 652 Medicol Towers So.
Louisville, 40202
502-583-1697
Res. 410 Mockingbird Hill Rood
Louisville, 40207
502-895-1289
NS 1701 35

Graves, Harold B.
Audrey
Ofc. 1700 Polm Volley Dr. W.
Horlingen, TX, 78550
Res. 1700 Polm Volley Dr. W.
Horlingen, TX, 78550
512-425-8271
OBG 2405 37

Graves, Edward C.
Betty
Ofc. Boptist Eost
Doctors Bldg.
Louisville, 40207
502-897-7172
Res. 411 Lightfoot Rood
Louisville, 40207
502-895-6518
U 1602 53

Graves, Stuart
Eleonor
Ofc. 506 Fincostle Bldg.
Louisville, 40202
502-587-8471
Res. 116 Sweetbrior Lone
Louisville, 40207
502-896-4908
IM 3101 47

Gray, Laman A.
Alice
Ofc. 407 Childrens
Fdn. Bldg.
Louisville, 40202
502-587-0767
Res. 8 River Hill Rood
Louisville, 40207
502-896-4659
OBG 1907 32

Gray, Helen M.
John F. Ice
Ofc. 4890 Brownsboro
Medicol Center
Louisville, 40207
502-896-0137
Res. 7302 Shodwell Lone
Prospect, 40059
502-228-1922
P 2402 50

Gray, Jr., Laman A.
Julie
Ofc. U of L
Louisville, 40202
502-583-8203
Res. 428 Lightfoot Rood
Louisville, 40207
502-897-6194
C 1907 67

Gray, Sr., William R.
Morgoret
Ofc. 2005 High Conyon Rd.
Louisville, 40207
Res. 2005 High Conyon Rd.
Louisville, 40207
C

Greathouse, Richard F.
Ofc. 5 Triongle Ctr.
Louisville, 40220
502-458-3219
Res. 10711 Old Toylorsville Rd.
Louisville, 40299
502-267-1388
PD 1602 51

Green, Gordon L.
Dickie
Ofc. 712 Medicol Towers Bldg.
Louisville, 40202
502-585-5274
Res. 2001 Round Ridge Rood
Louisville, 40207
502-893-2301
OTO 1602 39

Green, James W.
Cynthio
Ofc. 213 Moser Rd., P.O. 43135
Louisville, 40243
502-245-4164
Res. 9106 Pine Loke Drive
Louisville, 40220
502-499-7813
D 1602 74

Greenberg, Richard A.
Morjorie
Ofc. HSC, 116
Louisville, 40292
502-588-6181
Res. 2512 Dundee Rood
Louisville, 40205
502-458-4371

Greenberg, Robert B.
Regino
Ofc. 4010 DuPont Circle
Louisville, 40207
502-896-9737
Res. 3706 Hycliffe Ave.
Louisville, 40205
502-897-7347
P 803 67

Greiver, S. Philip
Rox
Ofc. 224 E. Broodwoy, Suite 700
Louisville, 40202
502-587-0915
Res. 1801 Bunker Hill Court
Louisville, 40205
IM 1602 55

Grider, Roger D.
Meredith
Ofc. 8107 Woodcreek Ct.
Louisville, 40222
502-897-0639
Res. 413 Jorvis Lone
Louisville, 40207
502-897-1384
R 1612 76

Grider, Jr., Paul C.
Meredith
Ofc. Boptist E. Doctors Bldg.
Louisville, 40207
502-897-0639
Res. 413 Jorvis Lone
Louisville, 40207
502-897-1384
IM 1602 58

Griffin, David W.
Yvonne
Ofc. 2139 Edgehill Rd.
Louisville, 40205
Res. 2139 Edgehill Rd.
Louisville, 40205
502-451-2092
SU 1602 43

Griffin, Larry P.
Glorio
Ofc. 215 Medicol Towers N.
Louisville, 40202
502-589-2229
Res. 1907 Doleview Lone
Louisville, 40207
502-895-9835
OBG 1602 73

Grimaldi, Manuel
Ercornito
Ofc. 850 Borret Ave. #301
Louisville, 40204
502-583-5318
Res. 2504 Monchester Rd.
Louisville, 40205
502-459-7964
IM 8902 71

Groff, Diller B.
Koy
Ofc. P.O. Box 35070
Louisville, 40232
502-562-8630
Res. 525 Primrose Woy
Louisville, 40206
502-895-0842
SU 3207 61

Grumbles, Cecil L.
Betty
Ofc. 601 S. Floyd #501
Louisville, 40202
502-582-2537
Res. 39 Hill Rd.
Louisville, 40204
502-451-5111
OBG 1602 54

Guarnaschelli, John J.
Morty
Ofc. 568 Medicol Towers So.
Louisville, 40202
502-584-4121
Res. 3020 Poppy Woy
Louisville, 40206
502-584-4121
NS 1602 67

Gudex, Thomas V.
Ernestine
Ofc. 3126 Mylonto Ploce
Louisville, 40220
Res. 3126 Mylonto Ploce
Louisville, 40220
502-458-2340
GP 1602 28

Guerrero, Helen Q.
Alexis
Ofc. G-44 Medicol Arts Bldg.
Louisville, 40217
502-451-1437
Res. 907 Rugby Ploce
Louisville, 40222
502-426-5651
P 5088 63

Guerrero, Elmer M.
Filipinos
Ofc. 1800 Bluegross
Louisville, 40215
502-361-2301
Res. 9005 Lokeridge Drive
Louisville, 40272
502-937-5113
FP 8506 63

Guerrero, Filipinas
Elmer
Ofc. 1800 Bluegross
Louisville, 40215
502-361-2301
Res. 9005 Lokeridge Drive
Louisville, 40272
502-937-5113
FP 8506 63

Gultekin, Muharrem
Fozilet
Ofc. 101 Whipps Mill Rd.
Louisville, 40222
502-245-4121
Res. 101 South Whipps Mill Rd.
Louisville, 40222
502-426-5200
P 9302 49

Gushard, Robert H.
Liz
Ofc. P.O. Box 23129
Louisville, 40223
Res. P.O. Box 23129
Louisville, 40223
502-426-0287
OPH 3714 80

Haddad, Rolando I.
Elso
Ofc. 1314 Mo. Ave., POB 754
Jeffersonville, IN, 47130
812-283-7274
Res. 2104 Glen Cove Woy
Louisville, 40207
P 6301 56

JEFFERSON

Hafendorfer, Kenneth A.
Noncy
Ofc. 2500 Hermitoge Woy
Louisville, 40222
502-425-2939
Res. 8915 Cromwell Hill Rd.
Louisville, 40222
502-425-0475
FP 1602 64

Hafendorfer, Daniel L.
Potti
Ofc. 2500 Hermitoge Woy
Louisville, 40222
502-425-2939
Res. 5511 Apoche Rd.
Louisville, 40207
502-897-9139
FP 1602 73

Hafner, John N.
Ofc. Medicol Arts Bldg.
Louisville, 40217
502-458-1934
Res. 7815 Wolf Pen Bronch Rood
Prospect, 40059
502-228-1368
OPH 1602 61

Hagan, Herbert H.
S 1907 13

Hagan, Thomas W.
Pot
Ofc. 9110 Leesgote Rd. Suite 1
Louisville, 40222
502-425-2292
Res. 111 Combridge Stotion Rd.
Louisville, 40223
PS 1612 64

Haick, Edward M.
Hester
Ofc. 3116 Runnymede Rd.
Louisville, 40222
502-752-3456
Res. 3116 Runnymede Rood
Louisville, 40222
502-425-0211
R 1206 61

Hale, Joan R.
Ofc. 1429 Everett Ave.
Louisville, 40204
Res. 1429 Everett Ave.
Louisville, 40204
502-451-3644
R 1602 51

Hall, D. P.
Minnie
Ofc. 1010 Heyburn Bldg.
Louisville, 40202
502-587-8326
Res. 6414 Glenwood Rood
Louisville, 40222
502-425-5354
SU 1602 21

Haller, Harold D.
Glendo
Ofc. 4503 Storlight Ln.
Louisville, 40291
502-459-4900
Res. 4503 Storlight Ln.
Louisville, 40291
502-491-8287
FP 3205 63

Hamberg, Marcelle
Cheryl J.
Ofc. 1916 Potterson St. 603
Noshville, TN, 37203
615-327-2400
Res. 4474 Clorksville Hgwy.
Noshville, Tenn., 37218
615-876-3821

Hamilton, James E.
Elizobeth
Ofc. Medicol Arts Bldg.
Louisville, 40217
502-451-1448
Res. 3219 Robin Rd.
Louisville, 40213
502-637-3985
ANES 1602 58

Hamilton, Michael T.
Joon
Ofc. 3368 Medicol Arts Bldg.
Louisville, 40217
502-456-4255
Res. 604 Riverwood Drive
Louisville, 40207
502-897-2413
OBG 1602 63

Hamm, Ronald J.
Amy
Ofc. 9003 Dennington Dr.
Louisville, 40222
502-245-0261
Res. 9003 Dennington Dr.
Louisville, 40222
502-426-2565
FP 1602 76

Hancock, James K.
Thereso
Ofc. Professionol Towers 379
Louisville, 40207
502-896-2525
Res. 2013 Croghon House Drive
Louisville, 40207
502-895-6369
GE 1602 74

Handelman, Cathryn C.
Nothon
Ofc. 10211 Stotio Lynn Ct.
Louisville, 40223
Res. 10211 Stotio Lynn Court
Louisville, 40223
502-245-5679
PD 1602 42

Handelman, Nathan
Cothryn
Ofc. 4001 Dutchmons Ln. #1 H.
Louisville, 40207
502-897-7137
Res. 10211 Stotio Lynn Court
Louisville, 40223
502-245-5679
A 1602 44

Hanes, Mervel V.
Liz
Ofc. 262 Medicol Towers So.
Louisville, 40202
502-582-1652
Res. 617 Cressbrook Drive
Louisville, 40206
502-895-1227
OBG 1602 46

Hanley, William J.
Morgoret B.
Ofc. 2120 Newburg Rd.
Louisville, 40205
502-459-3560
Res. 3011 Wicklond Rd.
Louisville, 40205
502-451-4939
P 1602 58

Harbrecht, Phil J.
Terry
Ofc. 7404 Glen Arbor Rd.
Louisville, 40222
502-895-3401
Res. 7404 Glen Arbor Rd.
Louisville, 40222
SU 3440 43

Harding, Calvin R.
Lindo
Ofc. St. Anthony Hosp.
Louisville, 40204
502-897-7401
Res. 2516 Seneco Volley Rd.
Louisville, 40205
502-451-3393
ANES 1602 65

Hargadon, Charles M.
Mortho Ann
Ofc. Dupont Suburbon Office
Bldg.
Louisville, 40207
502-897-1794
Res. 6107 Orion Rood
Louisville, 40222
ORS 1602 63

Hargett, Herbert P.
June
Ofc. P.O. Box 1417
Jeffersonville, IN, 47130
812-288-7179
Res. 1207 Melody Lone
Jeffersonville, IN, 47130
812-288-5759
OPH 1602 43

Harkess, James W.
Jonice P.
Ofc. Med. Reseorch Bldg.
Box 1055
Louisville, 40292
502-589-4448
Res. 3011 Lightheort Rd.
Louisville, 40222
502-425-9828
ORS 8701 48

Harlowe, Stuart
Betty
Ofc. 1919 Stote St.
Suite 302
New Albony, IN, 47150
812-945-2335
Res. 15 Triminghom Rood
New Albony, IN, 47150
812-945-2331
U 1602 59

Harrell, Frank W.
Lindo
Ofc. 2923 Arlington Rd.
Louisville, 40220
502-587-3225
Res. 2923 Arlington Rood
Louisville, 40220
502-459-3319
FP 902 75

Harris, Martin J.
Ofc. 121 N. Hubbords Ln.
Louisville, 40207
502-893-7124
Res. 121 North Hubbords Lone
Louisville, 40207
502-893-7124
PD 6603 35

Harris, J. Kenneth
Dorothy
Ofc. 4122 Shelbyville Rd.
Suite A.
Louisville, 40207
502-895-9421
Res. 5207 Tomohowk
Louisville, 40207
502-895-3646
PD 1005 48

Harris, Albert B.
Cloro
Ofc. 2225 W. Broodwoy #208
Louisville, 40211
502-775-6463
Res. 769 Greenridge Lone
Louisville, 40207
502-897-2735
OBG 4107 55

Harris, William D.
Mortho M.
Ofc. 720 Dones Holl Dr.
Louisville, 40206
502-561-3700
Res. 720 Dones Holl Drive
Louisville, 40206
ANES 1320 69

Harrison, Harold L.
Henrietto
Ofc. 601 So. Floyd St. #602
Louisville, 40202
502-585-4802
Res. 10414 Edgewoter Rood
Louisville, 40223
502-245-2565
NEP 1602 74

Harting, Jr., John E.
Corole
Ofc. 323 E. Chestnut Rodiology
Louisville, 40202
Res. 2209 Westridge Rd.
Louisville, 40222
502-425-6694
R 1602 74

Harty, James I.
Mory
Ofc. 210 Medicol Towers So.
Louisville, 40202
502-587-6904
Res. 9021 Binghom Drive
Louisville, 40222
502-426-1676
U 7303 69

Hatam, Ahmad
Korin Helen
Ofc. Univ. Hosp., Diog. Rod.
Louisville, 40202
502-588-5875
Res. 1366 Westlynne Woy
Louisville, 40222
502-426-0961
R 5088 53

JEFFERSON

Hawn, William F.
Lillylee
Ofc. DuPont Co.
Louisville, 40201
502-772-3661
Res. 3137 Brownsboro Rd.
Louisville, 40206
502-896-0186
IM 1602 45

Hayes, Oscar J.
Kitty
Ofc. 608 Medical Towers Bldg.
Louisville, 40202
502-584-4600
Res. 2420 Napoleon Blvd.
Louisville, 40205
502-452-9343
OBG 1602 45

Hayes, Ray H.
Jean
Ofc. 2120 Newburg Rd.
Suite 410
Louisville, 40205
502-456-4420
Res. 532 Primrose Way
Louisville, 40206
502-896-8315
P 802 50

Hayman, Mary L.
Edward B.
Ofc. 233 E. Gray St. #506
Louisville, 40202
502-589-8000
Res. 3912 Brookfield Ave.
Louisville, 40207
502-897-5974
PD 1602 79

Haynes, Douglas M.
Elizabeth
Ofc. 601 S. Flayd St.
Lauisville, 40202
502-583-3845
Res. 5204 Tomahawk Raad
Lauisville, 40207
502-895-4795
OBG 4212 46

Hazlett, Claude C.
Thamissa
Ofc. 3828 Bardstown Rd.
Lauisville, 40218
502-459-4900
Res. 3724 Willmar Ave.
Louisville, 40218
502-459-9841
FP 3205 63

Healy, Mark H.
Linda
Ofc. 200 E. Chestnut St.
Lauisville, 40202
502-588-6944
Res. 2212 Douglas Baulevard
Louisville, 40205
502-459-8128
P 406 67

Hedges, Jr., Houston
Patricia
Ofc. Highlands Baptist
Lauisville, 40204
502-897-8121
Res. 6509 Marina Dr.
Prospect, 40059
502-228-2775
R 1602 53

Heine, Burton M.
Mary Catherine
Ofc. 510 Audubon Medical Plaza
Lauisville, 40217
502-636-3521
Res. 3219 Oriole Rd.
Lauisville, 40213
502-635-2003
TS 1602 52

Heine, Lee A.
Jayce P.
Ofc. Box 218
Pekin, IN, 47165
Res. P.O. Box 218
Pekin, IN, 47165
812-967-3122

Heinicke, Mark H.
Hedvika
Ofc. 1904 Lauderdale Rd.
Lauisville, 40205
502-589-2063
Res. 1904 Lauderdale Road
Lauisville, 40205
502-451-7689
IM 1602 79

Heitz, Raymond
Helen
Ofc. 546 Barberry Ln.
Lauisville, 40206
Res. 546 Barberry Lane
Lauisville, 40206
502-897-1419
ANES 1602 33

Hejazi, Masoud S.
Julia Ann
Ofc. 300-3 Rockcliff Ct.
Louisville, 40218
502-588-5390
Res. 300-3 Rackcliff Ct.
Lauisville, 40218
502-451-7073
P

Hellmann, Jack K.
Mary Jane
Ofc. 2146 Lancashire Ave.
Lauisville, 40205
502-451-0734
Res. 610 Cressbrook Drive
Louisville, 40206
502-896-4215
FP 1602 53

Hemmer, John A.
Mary Kay
Ofc. 4B Suburban Medical Plaza
Louisville, 40207
502-897-0634
Res. 8906 Cromwell Hill Rd.
Lauisville, 40222
502-425-0200
SU 3441 46

Hendon, James R.
Sarah
Ofc. 506 Fincastle Bldg.
Louisville, 40202
502-587-8471
Res. 1912 Speed Alley
Lauisville, 40205
502-456-6868
IM 1602 34

Hendricks, Douglas L.
Ofc. 9712 Timberbroak Dr.
Lauisville, 40223
Res. 9712 Timberbraak Drive
Louisville, 40223

Henkel, Terry W.
Gail
Ofc. 1442 Cherakee Rd.
Louisville, 40204
502-584-2338
Res. 1442 Cherakee Road
Lauisville, 40204
502-451-1602
C 1602 69

Hernandez, Alfonso
Julia
Ofc. 906 Nottingham Pkwy.
Louisville, 40222
502-451-4404
Res. 906 Nottingham Parkway
Lauisville, 40222
502-451-4404
EM 6202 61

Herrmann, Henry C.
Lois
Ofc. 419 Cannans Ln.
Lauisville, 40206
Res. 419 Cannons Lane
Lauisville, 40206
R 1602 20

Hersh, Joseph H.
Monique
Ofc. 7309 Keisler Way
Lauisville, 40222
502-588-5331
Res. 7309 Keisler Way
Louisville, 40222
502-423-1909
PD 2403 70

Hess, P. Patrick
Glaria
Ofc. 315 E. Ninth St.
New Albany, IN, 47150
812-945-5246
Res. 1313 Ridgeway Ave.
New Albany, IN, 47150
812-944-4394
PD 1602 45

Heyburn, Martha Keeney
John G.
Ofc. KY. Lions Eye
Res. Inst.
Lauisville, 40202
502-588-5466
Res. 55 Hill Raad
Louisville, 40204
502-459-0065
OPH 1602 80

Hicks, Shelby L.
Lucie
Ofc. 606 Wataga Dr.
Louisville, 40206
Res. 606 Wataga Dr.
Lauisville, 40206
502-895-5592
P 301 51

Hilb, Jeffrey A.
Francine
Ofc. Medical Arts Bldg.
Lauisville, 40217
502-452-1563
Res. 516 Indian Ridge Raad
Lauisville, 40207
502-897-0038
IM 1211 75

Hilgeford, Eric J.
Diane
Ofc. 1809 Aberdeen Dr.
Lauisville, 40205
502-893-0495
Res. 1809 Aberdeen Drive
Louisville, 40205
FP 1612 75

Hill, David L.
Ruth
Ofc. 50 Hill Rd.
Louisville, 40204
Res. 50 Hill Raad
Lauisville, 40204
502-451-1349
IM 1602 12

Hinkebein, James M.
Susan
Ofc. 269 Whittington Pkwy.
Lauisville, 40222
502-425-5166
Res. 2015 Gardiner Lane
Louisville, 40205
502-491-2189
PD 1602 74

Hite, Suzanne M.
Ofc. 1250 Everett Ave.
Louisville, 40204
502-587-3225
Res. 1250 Everett Avenue, #2
Louisville, 40204
502-458-1884
IM 4212 78

Hitt, Owen K.
Missy
Ofc. 601 Sauth Floyd St.
Louisville, 40202
502-451-0300
Res. 2107 Glenview Avenue
Lauisville, 40222
502-426-7088
ORS 1602 66

Hodge, Kenneth W.
Yvanne
Ofc. 273 Evangeline Ave.
Lauisville, 40214
502-361-2315
Res. 4304 Mt. Vernan Raad
Louisville, 40220
502-456-1261
GP 1602 60

Hodge, Steven J.
Kathie
Ofc. 201 Rebel Dr.
PeeWee Valley, 40056
502-585-5249
Res. 201 Rebel Drive
Pewee Valley, 40056
502-241-1550
D 1602 71

JEFFERSON

Hodsden, James E.
Ofc. 550 Sa. Jocksan, Cordia.
Louisville, 40202
502-588-7959
IM 3440 76

Hoffman, Delbert G.
Mortho
Ofc. 4500 Meridale Rd.
Louisville, 40214
Res. 4500 Meridale Rd.
Lauisville, 40214
502-366-6729
GP 1602 30

Hoffman, Charles R.
Elise
Ofc. 530 Fairfield Dr.
Louisville, 40206
502-897-2440
Res. 530 Foirfield Dr.
Lauisville, 40206
502-897-2761
ORS 1602 43

Hoffman, Jr., Russell
Linda
Ofc. Suburbon Med. Pl. Ste. LLE
Lauisville, 40207
502-895-4263
Res. 10605 Ledbury Caurt
Lauisville, 40243
502-244-1460
IM 1602 76

Hollander, Jayne L.
Gregory Pilatte
Ofc. 510 East Chestnut
Lauisville, 40201
502-589-4450
Res. 1818 Knallwaod Rood
Lauisville, 40206
502-895-2582
PATH 1612 74

Hollinsworth, John L.
Mory Jone
Ofc. Boptist E. Doctars Bldg. 302
Lauisville, 40207
502-897-0287
Res. 11111 Holkirk Place
Lauisville, 40243
502-245-9447
OBG 1602 63

Holmes, Eugene M.
Jay P.
Ofc. 11518 Main St.
Middletawn, 40243
502-245-4168
Res. 11518 Moin St.
Middletawn, 40243
502-583-5252
GP 1602 49

Holmes, J. William
Jayce
Ofc. 202 Dactars Office Bldg.
Lauisville, 40202
502-589-6172
Res. 5801 Beyrath Caurt
Louisville, 40207
502-897-9940
N 1602 70

Holt, Richard T.
Sue R.
Ofc. 601 Sa. Floyd
Suite 200
Louisville, 40202
502-585-4376
Res. 2104 Stormant
Lauisville, 40207
502-893-0056
ORS 4106 73

Holt, Jr., Homer A.
Ginny
Ofc. 210 Medicol Towers
Louisville, 40202
502-587-6904
Res. 25 Glenwaad Raad
Lauisville, 40222
502-425-0412
U 1602 65

Holtgrave, Dorothy E.
Klous Mittelsten
Ofc. 2242 Gladstane Ave.
Louisville, 40205
Res. 451-3454
GP 1602 57

Holtman, James S.
Judy
Ofc. 5846 Brittany Waads Cr.
Lauisville, 40222
502-582-2537
Res. 5846 Brittany Waods Cr.
Lauisville, 40222
502-426-7355
OBG 1602 74

Holtman, Judy H.
James
Ofc. 305 W. Broodwoy
Louisville, 40202
502-587-8471
Res. 5846 Brittany Waads Cr.
Louisville, 40222
502-426-7356
IM 1602 75

Holtzapple, Kenneth E.
Patricio D.
Ofc. RM. A1H05,5
530 S. Jockson St.
Louisville, 40202
502-588-5201
Res. Rm, A1H05,5
530 S. Jockson
Louisville, 40202
502-228-4085
FP

Hopkins, William E.
Laetta
Ofc. 4010 Dupant Cir. Suite 225
Louisville, 40207
502-893-2510
Res. 1006 Bellewaad Rd.
Ancharage, 40223
502-245-8655
ANES 1602 47

Horan, Leo G.
Noncy Coralyn
Ofc. Ambulatary Care Bldg.
Lauisville, 40292
502-588-5241
Res. 2800 Juniper Hill Caurt
Louisville, 40206
502-897-3418
C 1701 49

Horton, James K.
Jocquelyn
Ofc. 4413 W. Braadwoy
Lauisville, 40211
502-774-5711
Res. 8804 Lynn Hall Caurt
Praspect, 40059
502-228-4304
FP 803 76

Hoskins, III, Albert B.
Judy
Ofc. 410 Auduban Med. Ploza
Lauisville, 40217
502-636-5163
Res. 2814 Newburg Raad
Lauisville, 40205
502-458-3091
IM 1612 69

Houghton, William J.
Mory Alice
Ofc. Narton Children's Hasp.
Lauisville, 40202
502-589-8615
Res. 2103 Westridge Raad
Louisville, 40222
502-426-5854
P

Howard, R. Brooks
Ann
Ofc. Norton-Children's Hasp.
Lauisville, 40202
502-562-7600
Res. 330 Mackingbird Valley Rd.
Lauisville, 40207
502-897-2988
R 1602 61

Howard, John D.
Lynn
Ofc. 2560 Dell Rd.
Lauisville, 40205
502-459-6095
Res. 2560 Dell Rd.
Louisville, 40205
502-456-1149
IM 1602 65

Howe, W. Robin
Elaine S.
Ofc. 700 Children's Fnd. Bldg.
Louisville, 40202
502-583-8303
Res. 21 Paplar Hill Rood
Lauisville, 40207
502-893-3286
TS 0601 71

Howell, Robert S.
Anno
Ofc. 3907 Old Brawnsboro Rd.
Lauisville, 40207
502-587-4460
Res. 3907 Old Brownsbora Rd.
Lauisville, 40207
502-895-0340
PATH 1602 52

Howell, Joyce E.
Ofc. 739 Sauthwestern Pkwy.
Louisville, 40211
Res. 739 Sauthwestern Pkwy.
Louisville, 40211
502-776-1119
PD 3707 58

Howell, Jr., Robert
Ofc. University Hasp.
Louisville, 40202
502-589-4321
Res. 521 Zarn Avenue, E-8
Louisville, 40206
502-897-6779
OBG

Howerton, Lonnie W.
Phyllis
Ofc. 210 Medicol Towers Bldg.
Louisville, 40202
502-587-6904
Res. 23 Sauthwind Raod
Lauisville, 40207
502-893-7657
U 1602 51

Huang, Tsung Yao
Mary
Ofc. Generol Hosp.-Radiology
Lauisville, 402092
502-588-5875
Res. 44007 Cammanche Troil
Lauisville, 40207
502-893-7140
R 6103 66

Hubbard, John G.
Noncy
Ofc. Suburban Medicol Plozo
Lauisville, 40207
Bergsma
Res. 4306 Tolahi Woy
Lauisville, 40206
502-895-2090
U 1602 71

Hubbuch, Anthony
Missy
Ofc. 330 E. Ook St.
Lauisville, 40203
502-636-2833
Res. 2904 Reidling Dr.
Lauisville, 40206
502-895-8040
FP 1602 69

Hubbuch, Sebastian
Kothy Starnes
Ofc. 4612 Fairview Dr.
Columbus, GA, 31907
404-571-1000
Res. 404-568-0079
FP 1602 81

Huber, Charles H.
Edith
Ofc. 4602 Sauthern Pkwy.
Lauisville, 40214
502-368-3392
Res. 3901 Green Haven Lane
Goshen, 50026
502-222-9851
OBG 1612 68

Hudson, Richard T.
Ofc. 3185 Lexington Rd.
Lauisville, 40206
Res. 3185 Lexington Rd.
Louisville, 40206
ORS 1602 24

JEFFERSON

Hughes, Elmo K.
Rachel
Ofc. 6501 Dixie Hgwy.
Pleasure Ridge, 40258
502-447-4864
Res. 5123 Christie Avenue
Louisville, 40216
502-447-3310
FP 1602 51

Hulett, Paul M.
Ernestine H.
Ofc. 5840 Denison Dr.
Venice, FL, 33595
813-493-1268
OM 1602 44

Hulsman, Philip J.
Therese
Ofc. 110 Audubon Medical Plaza
Louisville, 40217
502-636-3387
Res. 3005 Shallcross Woy
Louisville, 40222
502-426-4938
OBG 1602 61

Hume, Walter I.
Flo
Ofc. 5A Suburban Medical Plaza
Louisville, 40207
502-897-0688
Res. 2012 Starmont Rd.
Louisville, 40207
502-893-7706
SU 2001 49

Hummel, Jr., John D.
Mary
Ofc. Kentucky Baptist Hosp.
Louisville, 40204
502-583-4841
Res. 8602 Cheltenhom Ct.
Louisville, 40222
502-425-0992
R 1602 52

Humphrey, David M.
Carol
Ofc. 5313 Hempsteod Rd.
Louisville, 40207
502-584-0166
Res. 5313 Hempstead Rd.
Louisville, 40207
502-896-6386
ANES 1602 69

Hunter, Stuart M.
Elizabeth
Ofc. 4750 Bordstawn Rd.
Louisville, 40218
502-491-6240
Res. 7720 Nalan Dr.
Louisville, 40291
502-499-1051
FP 1602 53

Hurst, Arthur T.
Morian
Ofc. 801 Barret Ave.
Louisville, 40204
502-584-6173
Res. 2305 Raleigh Ln.
Louisville, 40206
502-896-8298
IM 1602 25

Hurst, Jr., Arthur T.
Danna
Ofc. 801 Barret Ave.
Louisville, 40204
502-584-6173
Res. 6202 Glenhill Rd.
Louisville, 40222
502-423-0634
IM 1602 70

Hurt, O. James
Koy
Ofc. 2112 Westridge Rd.
Louisville, 40222
502-895-3401
Res. 2112 Westridge Rd.
Louisville, 40222
502-425-2779
ORS 1602 47

Hutsell, Thomas S.
Virginia
Ofc. 4400 Churchman Ave.
Louisville, 40215
502-361-6522
Res. 557 Sunnyside Dr.
Louisville, 40206
502-893-2614
PATH 1602 60

Hyman, J. Barrett
Nancy
Ofc. 601 S. Floyd St.
Louisville, 40202
502-583-5524
Res. 2811 Rainbaw Dr.
Louisville, 40206
502-897-6856
OBG 1602 61

Ibayan, Domingo M.
Ofc. Central State Hosp.
Louisville, 40223
502-245-4121
Res. 2908 Weissinger Raad
Louisville, 40222
502-425-3775
P 8507 59

Ice, John F.
Helen A.
Ofc. 1301 Hepburn Ave.
Louisville, 40204
502-588-6941
Res. 7302 Shadwell Ln.
Prospect, 40059
502-228-1922
P 801 53

Ignacio, Olegario J.
Oliva
Ofc. 1035 Wall St. Rm. 207
Jeffersanville, IN, 47130
812-282-1351
Res. 2605 St. Andrews Rd.
Jeffersonville, IN, 47130
N

Irick, Max
Julia
Ofc. 430 Auduban Med. Plaza
Louisville, 40217
502-636-5532
Res. 1906 Lanlipman Ct.
Louisville, 40207
502-895-5120
IM 1612 73

Irigoyen, David E.
Heddo
Ofc. 2120 Newburg Rd.
Suite 407
Louisville, 40205
502-452-6359
Res. 801 Rugby Pl.
Louisville, 40222
502-425-2206
P 5601 55

Irlandez, Didsdado
Pally
Ofc. 9107 Linn Stotian Rd.
Louisville, 40222
502-933-2110
Res. 9107 Linn Station Rd.
Louisville, 40222
502-425-4153
ANES 5088 68

Irwin, Jeri P.
Jock
Ofc. 406 Flat Rock Rd.
Louisville, 40223
502-588-5875
Res. 406 Flat Rock Rd.
Louisville, 40223
502-245-0821
R 1602 77

Isaacs, Arthur H.
Florence
Ofc. 5818 Preston Hwy.
Louisville, 40219
502-969-2309
Res. 3013 Hayfield Dr.
Louisville, 40205
502-454-4438
PD 1602 56

Ishkanian, Prospero
Doro
Ofc. 1-G Suburban Plazo
Louisville, 40207
502-897-6467
Res. 7101 Wesbaro Rd.
Louisville, 40222
502-426-4227
FP 5088 63

Jackson, Chrisman Spears
Viola
Ofc. 46 Solcedo Ct. Rt. 23
Ft. Myers, FL, 33908
Res. 46 Solceda Ct. Rt. 23
Ft. Myers, FL, 33908
813-482-8060
FP 1602 39

Jackson, William J.
Caral
Ofc. 1 Audubon Plaza
Louisville, 40217
Res. Rt. 1 Bax 216 A
Smithfield, 40068
502-845-2475
EM 1602 75

Jacob, Robert A.
Elaine
Ofc. 1900 Bluegross Ave.
Louisville, 40215
502-367-1744
Res. 8808 Dennington Drive
Louisville, 40222
502-425-5492
ORS 3440 69

Jaegers, Kenneth R.
Patricia
Ofc. 4001 Dutchmans Ln.
Louisville, 40207
502-897-9801
Res. 515 Tiffany Lane
Louisville, 40207
502-895-6462
OPH 1602 61

Jager, Nirmala M.
Ofc. 1558 Cherokee Rd.
Louisville, 40205
502-459-1478
Res. 1558 Cherokee Rood
Louisville, 40205
502-451-1138
IM 5088 67

James, Grace M.
Ofc. 2209 Braodwoy
Louisville, 40211
502-778-4530
PD 4107 50

James, III, Thomas
Ofc. 4545 Bishop Ln.
Louisville, 40218
502-459-9700
Res. 1375 Sa. 2nd St.
Louisville, 40208
502-637-4917
IM 1612 72

Jankowski, Dennis A.
Carol
Ofc. 810 Barret Ave.
Louisville, 40204
502-561-3706
Res. 2800 Circlewaad Ct.
Louisville, 40206
502-897-7740
R 3713 68

Jarboe, Charles H.
Corlo Ann
Ofc. HSC, 1406
Louisville, 40292
502-588-5158
Res. 1025 Everett Ave. #24
Louisville, 40204
502-458-6969

Jelsma, Lawrence F.
Sherry
Ofc. 420 Auduban Medical Plaza
Louisville, 40217
502-636-9130
Res. 5818 Orion Rd.
Louisville, 40222
502-426-4487
NS 1907 62

Jelsma, Richard K.
Elene
Ofc. 420 Audubon Medical Plaza
Louisville, 40217
502-636-9130
Res. 102 Wampum Rd.
Louisville, 40207
502-895-3568
NS 1206 63

Jennings, William N.
Jeanne
Ofc. 5135 Dixie Hwy.
Louisville, 40216
502-447-3242
Res. 509 Altagate Rd.
Louisville, 40206
FP 1612 70

JEFFERSON

Jennings, Clifford V.
Elizabeth
Ofc. 1900 Bluegrass Suite 300
Louisville, 40215
502-459-6095
Res. 2026 Tyler Ln.
Louisville, 40205
502-458-7640
IM 1602 70

Jensen, Johan N.
Polly B.
Ofc. Suite 200 1170 E. Broadwoy
Louisville, 40204
502-587-6875
Res. 2005 Woodford Place
Louisville, 40205
502-465-1955
OTO 4212 62

Jewell, James R.
Ofc. 4010 Dupant Cir. #420
Louisville, 40207
502-895-6588
Res. RR 3, Box 296, Garden Cir.
LaGrange, 40031
502-587-0411
OBG 1602 75

John, Maurice E.
Sandy
Ofc. 1305 Wall St.
Jeffersonville, IN, 47130
812-288-9011
Res. 1000 Alto Visto Rd.
Louisville, 40205
502-897-5642
OPH

Johnson, William W.
Charlotte
Ofc. P.O. Bax 2967
Cleveland, TN, 37311
615-472-4596
Res. 3512 Windsar Circle
Clevelond, TN, 37311
615-479-3460
SU 1602 51

Johnson, Sandra L.
Russell
Ofc. 105 Dorsey Way
Louisville, 40223
502-589-8200
Res. 105 Dorsey Woy
Louisville, 40223
502-425-9448
PD 1602 73

Johnson, John R.
Ofc. 5903 Hickman Ct.
Louisville, 40207
Res. 5903 Hickman Court
Lauisville, 40207
ORS 1602 76

Johnson, George S.
Ofc. 5104 Shadow Woad Ln.
Prospect, 40059
PATH 1320 76

Johnson, Jr., Hollis
Mory
Ofc. 2120 Newburg Rd.
Lauisville, 40205
502-456-1980
Res. 205 Doleview Ln.
Lauisville, 40207
502-893-5990
P 1602 45

Jones, Hunt B.
Evelyn
Ofc. 1371 Bordstown Rd.
Lauisville, 40204
502-451-6078
Res. 1371 Bordstown Rd.
Lauisville, 40204
502-451-6078
GP 2001 38

Jones, Raymond E.
Lee
Ofc. 1234 Medical Arts Bldg.
Louisville, 40217
502-459-3760
Res. 1602 Gardiner Ln.
Apt. 122
Louisville, 40205
502-459-1826
OTO 1602 45

Jones, Walter D.
Barbara
Ofc. 5518 Apache
Lauisville, 40207
502-589-4321
Res. 5518 Apache Rd.
Lauisville, 40207
502-897-2787
PATH 1602 72

Jones, W. Scott
Borbaro
Ofc. 3950 Kresge Woy
103 Bop. E.
Lauisville, 40207
502-897-5139
Res. 4713 Kittyhawk Woy
Lauisville, 40207
502-893-5448
SU 1602 77

Jones, Lawrence M.
Ginny D.
Ofc. 615 Fincastle Bldg.
Lauisville, 40202
502-585-2377
Res. 2512 Cross Hill Court #40
Louisville, 40206
502-896-8129
PD 1602 78

Jones, Kristie G.
Ofc. 148 Whiteholl Terr.
Louisville, 40220
502-588-5254
Res. 148 Whitehall Terroce
Louisville, 40220
502-451-3326
R

Jorrisch, Mark Steven
Mory
Ofc. 410 Audubon Medicol Pl.
Louisville, 40217
502-636-5163
Res. 2372 Volley Vista Rd.
Louisville, 40205
502-451-1645
IM 1005 77

Jose, Baby
Mary
Ofc. James Brawn Concer Ct.
Lauisville, 40202
502-588-5254
Res. 508 Palisodes Ct.
Louisville, 40223
502-425-8864
R 7018 71

Joule, William W.
Rasemorie
Ofc. St. Anthony Hosp.
Lauisville, 40204
502-587-1161
Res. 6912 Wythe Hill Cr.
Praspect, 40059
502-228-8812
R 1602 57

Jue, Fun Far
Chieh-Chen
Ofc. 4010 Dupant Cr.
Ste. 225
Louisville, 40207
502-893-2510
Res. 8305 Alpena Way
Louisville, 40222
502-423-9823
ANES 6104 70

Jurige, John H.
Cotherine
Ofc. 2313 Medical Arts Bldg.
Louisville, 40217
502-452-1552
Res. 26 So. Sheridan
Louisville, 40220
502-458-3738
U 1602 54

Kahle, Louis L.
Borbora
Ofc. 4884 Brownsboro Rd.
Louisville, 40207
502-896-4459
Res. 8110 Brownsboro Rd.
Lauisville, 40207
502-897-2058
PD 3441 61

Kaiser, Robert J.
Starr
Ofc. Suburban Medical Ploza
4-E
Lauisville, 40207
502-897-9802
Res. Old Horrods Creek Rd.
Anchorage, 40223
502-245-5454
OPH 1206 59

Kalbfleisch, Sheri A.
Paul
Ofc. 801 Borret Ave. Suite 222
Louisville, 40204
502-583-1161
Res. 501 Bromwell Drive
Lauisville, 40204
502-244-1725
D 1602 78

Kanovitz, Bob S.
Jocqueline
Ofc. 2120 Newburg Rd. 215
Louisville, 40205
502-451-8016
Res. 2327 Broakside Drive
Lauisville, 40205
P 1602 65

Kaplan, Martin Z.
Hartense
Ofc. 3333 Bardstown Rd.
Louisville, 40218
502-452-6337
Res. 5100 Brawnsboro Road
Lauisville, 40222
PD 1602 41

Karalakulasingam, Raja
Peace
Ofc. 1834 Lydo Ave.
Bawling Green, 42101
502-589-4148
Res. 2105 Round Ridge Road
Louisville, 40207
502-893-8939
NEP 5088 62

Karibo, John M.
Norma
Ofc. 2120 Newburg Rd.
Louisville, 40205
502-456-6200
Res. 3116 Oriole Dr.
Louisville, 40213
A 1602 63

Karp, David W.
Cheryl
Ofc. Suburbon Medical Plozo
Louisville, 40207
502-897-1604
Res. 6200 Orian Rd.
Lauisville, 40222
502-426-8899
OPH 1602 68

Kasdan, Morton L.
Ann S.
Ofc. 4006 Dupont Cir.
Louisville, 40206
502-897-1601
Res. P.O. Box 6095
Louisville, 40222
502-426-3292
PS 1602 63

Kasey, Arthur R.
Ruth
Ofc. 3323 Medicol Arts Bldg.
Louisville, 40217
502-452-6456
Res. 2566 Cherosen Rd.
Louisville, 40205
502-454-4712
P 1602 35

Kastan, Louis Berman
Mary Sue
Ofc. 250 E. Liberty St. 100
Louisville, 40202
502-583-1205
Res. 1132 Rostrevar Cr.
Lauisville, 40205
502-897-3638
R 1602 72

Katz, Donald B.
Shirley
Ofc. 3950 Kresge Woy
Louisville, 40207
502-897-0280
Res. 4109 Waadstone Woy
Lauisville, 40222
502-426-1819
OBG 1602 62

Katz, Lowell D.
Mortha
Ofc. 1170 E. Broadwoy #401
Lauisville, 40204
502-584-6666
Res. 211 Trovois Rd.
Louisville, 40207
502-895-3573
CRS 1602 72

JEFFERSON

Katz, David S.
Barbara
Ofc. 3333 Bardstown Rd.
Lauisville, 40218
502-452-6337
Res. 4513 Deepwood Drive
Louisville, 40222
502-228-4420
PD 2007 77

Kayerker, Udayakumar M.
Chitrarekho
Ofc. 323 East Chestnut St.
Lauisville, 40202
502-558-5851
Res. 514 Nottinghom Pkwy.
Lauisville, 40222
ANES 5088 70

Keaney, John M.
Mory William
Ofc. 418 Jorvis Ln.
Louisville, 40207
Res. 418 Jorvis Ln.
Louisville, 40207
502-896-0206
GP 1602 38

Keeling, Marie M.
Paul
Ofc. NKC Inc 200 E. Chestnut
Louisville, 40202
502-562-7850
Res. 507 Penwood Rd.
Louisville, 40206
502-895-1504
PATH 1602 56

Keeney, Arthur H.
Virginia
Ofc. 301 E. Muhammod Ali Blvd.
Lauisville, 40202
502-588-5466
Res. 4018 Glenview Avenue
Glenview, 40025
502-895-5274
OPH 1602 44

Keeney, Virginia T.
Arthur
Ofc. 4018 Glenview Ave.
Glenview, 40025
502-588-6181
Res. 4018 Glenview Avenue
Glenview, 40025
502-895-5274
P 1602 54

Keisler, Robert L.
Emily
Ofc. Dactars Office Bldg.
Lauisville, 40202
502-584-5116
Res. 2000 Glenview Ave.
Lauisville, 40222
502-425-5611
ORS 1602 58

Keller, William K.
Elizabeth
Ofc. 4013 St. Ives Ct.
Lauisville, 40207
Res. 4013 St. Ives Ct.
Lauisville, 40207
502-893-7800
P 1602 31

Kelley, Jr., Thomas A.
Patricia
Ofc. 220 Abraham Flexner Way
Louisville, 40202
502-584-3376
Res. 24 Rio Vista Dr.
Lauisville, 40207
502-896-6673
PM 2005 61

Kemper, F. Warren
Betty
Ofc. 234 E. Gray St. #228
Louisville, 40202
502-585-2361
Res. 1120 Ridge Line Dr.
Louisville, 40207
502-896-6794
IM 1602 57

Kemper, Michael G.
Ofc. 4500 Churchmon Ave.
Lauisville, 40215
502-361-1389
Res. 4500 Churchman Ave.
Louisville, 40215
FP 1602 62

Kho, Eusebio C.
Grace
Ofc. 137 E. McClain
Scattsburg, IN, 47170
812-752-5659
Res. 14 Carlo Lane
Scottsburg, IN, 47170
812-752-5847
SU

Kidd, Robert R.
Bobbie
Ofc. 5115 S. 3rd St.
Louisville, 40214
502-366-1411
Res. 1959 Gordiner Lane
Lauisville, 40205
502-458-6513
PD 1602 53

Kidd, Robert C.
Jane C.
Ofc. Suburban Hosp.
Lauisville, 40207
502-893-1000
Res. 12107 Edenwood Drive
Louisville, 40243
502-245-3187
R 1602 77

Kimsey, Letitia S.
Ofc. 2363 Tyler Ln.
Lauisville, 40205
Res. 2363 Tyler Ln.
Louisville, 40205
502-458-5446
PD 1602 51

Kincaid, Charles A.
Barbara
Ofc. 6-B Suburban Med. Plaza
Lauisville, 40207
502-897-1891
Res. 8910 Cramwell Hill Rd.
Louisville, 40222
502-425-3719
PS 1602 65

King, Nettie G.
Ofc. Sa. W. Jeff. Comm. Hosp.
Louisville, 40272
502-933-2110
Res. 107 Tribal Rd.
Louisville, 40207
502-895-9942
R 1602 55

King, Wallace M.
Pat
Ofc. 9822 Third St. Rd.
Louisville, 40272
502-937-3864
Res. 511 Cauntry Ln.
Lauisville, 40207
502-893-2402
FP 1602 59

Kinnaird, David W.
Lonie
Ofc. 301 Child. Hosp.
Faund. Bldg.
Louisville, 40202
502-583-0485
Res. 2105 Northfield Drive
Louisville, 40222
502-423-0077
SU 1005 45

Kircher, Christopher
Amy Nichols
Ofc. 629 Oak St.
Suite 601
Cincinnati, OH, 45206
513-221-1100
Res. 933 Porodrome St.
Cincinnati, OHIO, 45202
513-621-8456

Kirsch, Peter T.
Ofc. 220 Audubon Med. Plaza
Lauisville, 40217
502-636-9226
Res. 12106 Osoge Rd.
Lauisville, 40223
ORS 3103 64

Kirtley, Louis R.
Olivia
Ofc. 4130 Dutchmans Ln.
Louisville, 40207
502-583-8341
Res. 3710 Troil Ridge Rd.
Lauisville, 40222
502-426-2754
OBG 1602 76

Klein, Howard William
Ofc. 250 E. Liberty
Lauisville, 40202
PS 1602 77

Kleinert, Harold E.
Peggy
Ofc. 1001 Doctors' Bldg.
Louisville, 40202
502-581-9563
Res. Rt. 2
Charlestown, IN, 47111
502-581-9563
SU 3713 46

Kleinsteuber, Walter
Janet
Ofc. 3101 Breckinridge Ln.
Lauisville, 40220
502-451-8540
Res. 6700 U.S. 42
Louisville, 40220
502-228-3137
IM 1602 50

Kmetz, Donald R.
Joon
Ofc. Deon, UL School of Med.
Louisville, 40292
502-588-5184
Res. 3200 Trinity Rd.
Louisville, 40206
502-895-5530
PD 3440 58

Knight, E. Ray
Yvonne
Ofc. 207 Sporks Ave. #303
Jeffersonville, IN, 47130
502-282-4844
Res. 204 High St.
Jeffersanville, IN, 47130
812-282-4647
IM 1907 75

Knutson, Carl O.
Ofc. 310 Audubon Medicol Ploza
Louisville, 40217
502-636-9219
SU 2101 65

Koby, Jay S.
Laura
Ofc. 5105 Dunvegan Rd.
Lauisville, 40222
502-459-8913
Res. 5101 Dunvegon Rd.
Lauisville, 40222
502-426-3725
P 1602 61

Koby, Melvyn M.
Barbara
Ofc. 4001 Dutchmans Ln.
Louisville, 40207
Res. 5904 Brittony
Valley Rd.
Louisville, 40222
OPH 1602 64

Kolb, Gisela E.
Ofc. Medicol Towers So.
Suite 450
Louisville, 40202
502-585-4562
Res. 1611 Spring Drive
Lauisville, 40204
502-451-9528
P 6804 48

Kommor, Zollman
Maurine
Ofc. 3031 Breckinridge Ln.
Profeссional Bldg. E.
Lauisville, 40220
502-451-8540
Res. 669 Breckinridge Ln.
Lauisville, 40207
502-897-0101
IM 1602 51

Koons, Dexter D.
Brendo
Ofc. 1900 Bluegrass Ave. #200
Louisville, 40215
502-368-1681
Res. 7303 Fox Horbor Rd.
Prospect, 40059
NS 3440 66

JEFFERSON

Kosfeld, Rodney E.
Susonne
Ofc. University Hospitol
Holl 2B
Louisville, 40202
502-588-5845
Res. 2545 Dell Rood
Louisville, 40205
502-459-0504
H

Kotcamp, Wayne Wheeler
Eileen
Ofc. 60 Hill Rd.
Louisville, 40204
502-585-4376
Res. 60 Hill Rd.
Louisville, 40204
502-451-7776
ORS 1602 54

Kovachevich, Rudy
Ofc. 958 Cherokee Rd.
Apt. 3
Louisville, 40204
Res. 958 Cherokee Rood, #3
Louisville, 40204
PATH 1602 60

Kozhipat, Ancilla
Ofc. 1204 Bardstown Rd. #202
Louisville, 40204
Res. 1204 Bordstown Rd. #202
Louisville, 40204
FP 7033 72

Kraft, Jr., Robert P.
Denise L.
Ofc. 2614 Top Hill Rd.
Louisville, 40206
502-582-1317
Res. 2614 Top Hill Road
Louisville, 40206
502-893-3275
GE 1602 75

Kral, Kenneth J.
Ofc. 1900 Bluegrass Ave. #300
Louisville, 40215
502-361-0105
C 1602 77

Kremer, III, Eugene H.
Betty Sue
Ofc. 801 Barret Ave. #300
Louisville, 40204
502-584-2257
Res. 7307 Glen Arbor Rd.
Louisville, 40222
502-425-1557
OM 1602 63

Kremer, Jr., Eugene H.
Lindo
Ofc. 801 Borret Ave. #300
Louisville, 40204
502-584-2257
Res. 5017 Dunvegon Rd.
Louisville, 40222
502-425-6060
OM 1602 30

Kubota, Thomas T.
Ofc. 529 So. Jockson
Louisville, 40292
502-588-5245
Res. 1209 Pebble Pt.
Prospect, 40059
502-588-5245
IM 1202 70

Kudmani, George
Somia
Ofc. 9822 Old Third St.
Suite 300
Louisville, 40272
502-933-3313
Res. 15003 Birchom Rd.
Louisville, 40223
502-244-1928
OBG 5088 71

Kuhn, John E.
Brendo
Ofc. 304 Stodghill Pl.
Louisville, 40223
502-447-3242
Res. 932 Burning Spring Cr.
Louisville, 40223
502-245-2929
FP 1602 63

Kuhn, Clifford C.
Constonce
Ofc. P.O. Box 655
Louisville, 40201
502-588-5390
Res. Route 1, Webb Rd.
Finchville, 40022
502-584-6994
P 3702 67

Kuhn, Wolfgang F.
Soroh
Ofc. UL Psychiotry
Louisville, 40292
502-588-5867
Res. 2126 Speed Ave.
Louisville, 40205
502-451-4940
P 6806 72

Kuhn, Jr., Forrest S.
Mary Julio
Ofc. 1005 Dupont Sq., N.
Louisville, 40207
502-896-2131
Res. 37 Hill Rd.
Louisville, 40204
502-451-4399
A 1602 72

Kuhns, Dwight M.
Mottie
Ofc. 3525 Ephroim McDowell Dr.
Louisville, 40205
Res. 3525 Ephraim McDowell Dr.
Louisville, 40205
502-451-7048
PATH 1602 29

Kuhns, James G.
Joon
Ofc. Norton-Children's Hosp.
Louisville, 40292
502-562-7875
Res. 529 N. Hubbards Ln.
Louisville, 40207
502-893-3383
PATH 3207 59

Kumar, Sushil V.
Achhro
Ofc. 5135 Dixie Hwy.
Louisville, 40216
502-448-5701
Res. 1809 Round Ridge Rd.
Louisville, 40207
502-893-6096
OPH 7014 68

Kutz, Joseph E.
Mory Jone
Ofc. 1001 Doctors' Bldg.
Louisville, 40202
502-581-9563
Res. 20 Rio Visto Dr.
Louisville, 40207
502-581-9563
SU 2101 58

Lach, Jr., John A.
Glorio
Ofc. 5601 So. Third St.
Louisville, 40214
502-361-8801
Res. 1961 Meodow Creek Dr.
Louisville, 40218
502-452-9042
FP 1602 76

Lacy, Jerome P.
Koren
Ofc. 702 Colonel Anderson Pkwy.
Louisville, 40222
502-584-2338
Res. 702 Colonel Anderson Pkwy.
Louisville, 40222
502-425-7261
C 1602 70

Lambert, Jr., Glenn E.
Corol S.
Ofc. 4001 Dutchmans Ln. 4B
Louisville, 40207
502-897-0634
Res. 1511 Northwind
Louisville, 40207
502-897-0192
SU 1701 71

Landis, Edward E.
Eitha
Ofc. Rt. #2, Box 77
Anchorage, 40223
502-562-8601
Res. Rt. 2, Box 77
Anchoroge, 40223
502-245-5692
P 1206 35

Lansing, Allan M.
Donna
Ofc. 718 Medical Towers Bldg.
Louisville, 40202
502-584-6413
Res. 5215 Tomerlone Rd.
Louisville, 40207
502-895-1350
C 5906 53

Larson, John B.
Ofc. 334 E. Esplonade
Louisville, 40214
Res. 334 Esplonode Ave.
Louisville, 40214
502-366-8588
PD 1403 38

Larson, Gerald M.
Kristine
Ofc. 601 So. Floyd St. 700
Louisville, 40202
502-583-8303
Res. 2208 Bell Tavern Ct.
Louisville, 40207
502-893-9074
SU

Larson, Jr., John B.
Jeonnie
Ofc. 4602 Southern Pkwy. 2-C
Louisville, 40214
502-361-1197
Res. 3102 Tonook Ct.
Louisville, 40206
PD 1602 75

Lavery, J. Patrick
Barbaro
Ofc. 307 Childrens
Foundotion Bldg.
Louisville, 40202
502-583-3845
Res. 513 Cloverleof Rd.
Louisville, 40206
502-896-0381
OBG 3115 68

Lawson, George M.
Ofc. 315 E. Broadway
Louisville, 40202
502-585-2241
Res. 500 Romara Pl.
Louisville, 40222
502-425-1155
R 1602 57

LeRoy, Joseph B.
Dione
Ofc. Dept. of Psy.
U of L
Louisville, 40292
502-588-5395
Res. 414 Belgravio Ct.
Louisville, 40208
502-634-4030
P 1001 72

Leatherman, Kenton D.
Mildred
Ofc. 601 S. Floyd St.
Suite 200
Louisville, 40202
502-585-4376
Res. 5827 Brittony Woods Circle
Louisville, 40222
502-423-1116
ORS 1602 38

Leblique, Leopold B.
Corol C.
Ofc. 411 E. Muhommod Ali Blvd.
Louisville, 40202
505-588-6502
Res. 2606 Top Hill Road
Louisville, 40206
505-897-5024
FP 5201 73

Lee, James M.
Ofc. 801 Barret Ave.
Suite 308
Louisville, 40204
502-589-1331
Res. 8906 Shelbyville Rd. #5
Louisville, 40222
502-425-0402
IM 1602 63

JEFFERSON

Leggett, Jr., Albert E.
Betty
Ofc. 614 Fincastle Bldg.
Louisville, 40202
502-584-3062
Res. 442 Lightfoot Rd.
Louisville, 40207
502-935-6872
OPH 4105 45

Leguizamon, Carlos A.
Zulmo
Ofc. 7294 Monslick Rd.
Louisville, 40214
502-363-3646
Res. 8409 Fox Ridge Ct.
Louisville, 40272
502-935-6872
GP 5102 46

Lehman, Robert J.
Ruth
Ofc. 501 Ridgewood Rd.
Louisville, 40207
502-456-5100
Res. 501 Ridgewood Rd.
Louisville, 40207
502-896-1144
P 1320 44

Lehn, Frank W.
Tish
Ofc. 216 Heyburn Bldg.
Louisville, 40202
502-584-5293
Res. 108 Norwood Ploce
Louisville, 40203
502-451-3410
IM 1602 61

Lehocky, Ronald
Margoret
Ofc. 3333 Bardstown Rd.
Louisville, 40218
502-458-9746
Res. 1763 Cosselberry Rd.
Louisville, 40205
502-456-4625
PD 1206 6

Leight, Leonard
Adele
Ofc. 301 Doctors
Office Bldg.
Louisville, 40202
502-585-4321
Res. Glenview, 40025
502-585-4321
C 2402 45

Leis, Albert E.
Mory Ellen
Ofc. 5135 Dixie Hwy.
Louisville, 40216
502-447-3242
Res. 10906 Pow Pow Ln.
Goshen, 40026
FP 1602 74

Lepanto, Phillip B.
Rebecco
Ofc. St. Morys Hospitol
Huntington, WV, 25701
304-696-2505
Res. 109 Ridgewood Rd.
Huntington, WV, 25701
304-529-1827
R 1602 70

Lerman, Robert I.
Joonie
Ofc. Audubon Hosp. Path.
Louisville, 40217
502-636-7136
Res. 7100 River Rd.
Louisville, 40059
502-228-4077
PATH 1602 63

Levin, Richard M.
Pomelo
Ofc. 250 E. Liberty
Louisville, 40202
502-584-7787
Res. 307 Blue Ridge Rd.
Louisville, 40223
502-245-7782
OBG 1602 71

Levine, Ronald L.
Sonia
Ofc. 510 Doctors'
Office Bldg.
Louisville, 40202
502-587-6041
Res. 2907 Carlingford Dr.
Louisville, 40222
502-425-1525
OBG 1602 59

Lewis, Jr., Blaine
Belle
Ofc. 4001 Dutchmans Ln.
Louisville, 40207
502-897-7119
Res. 1052 Alto Visto Rood
Louisville, 40205
502-895-5896
SU 1602 43

Lewis, Jr., Norman V.
Noncy
Ofc. 4130 Dutchmans Ln.
3rd Floor
Louisville, 40207
502-897-1794
Res. 2350 Speed Ave.
Louisville, 40205
502-451-4249
ORS 1612 69

Lichtenstein, Steven J.
Roberto J.
Ofc. UL, Dept. of IM
Louisville, 40202
502-588-7932
Res. 2300 Dundee Rd. #4
Louisville, 40205
502-456-4907

Liebert, Jr., Carl W.
Ofc. 804 Medicol Towers No.
Louisville, 40202
502-585-3107
Res. 6001 Hackney Coach Dr.
Louisville, 40207
502-893-5132
SU 1602 64

Lindeman, Robert D.
Elizobeth Lynn
Ofc. 800 Zorn Ave.
Louisville, 40202
502-895-3401
Res. 2402 Glenview Ave.
Louisville, 40222
502-425-1004
IM 3115 56

Lindsay, Dwight E.
Borbaro
Ofc. 2120 Newburg Rd.
Louisville, 40205
502-456-6200
Res. 59 Hill Rd.
Louisville, 40204
502-459-2465
PD 1602 71

Ling, Ji-toong
Lydio
Ofc. 708 Chomberry
Louisville, 40207
502-589-4321
Res. 708 Chomberry Dr.
Louisville, 40207
502-895-4969
R 6102 42

Lister, Graham D.
Alison
Ofc. 1001 Doctors
Office Bldg.
Louisville, 40202
502-581-9563
Res. 5820 Orion Rd.
Louisville, 40222
502-561-4263
PS 8702 60

Liu, Pinghui V.
Judy C.
Ofc. 233 E. Groy St.
Room 316
Louisville, 40202
502-582-1642
Res. 47 Sycomore Road
Jeffersonville, IN, 47130
812-283-6830
IM 7501 47

Liu, Yong K.
Rui-Bo
Ofc. 323 E. Chestnut St.
Louisville, 40202
502-588-5845
Res. 6304 Shadow Wood Dr.
Prospect, 40059
H 6105 60

Llewellyn, John S.
Barbora
Ofc. Suite 302
850 Borret Ave.
Louisville, 40204
502-585-5046
Res. 990 Alta Visto Rd.
Louisville, 40205
502-895-8618
IM 1243 41

Lloyd, John A.
Fronces
Ofc. 5905 Croft Ct.
Louisville, 40207
502-587-0915
Res. 5905 Croft Ct.
Louisville, 40207
PUD 1602 68

Loeb, Thomas M.
Bonne Betz
Ofc. 801 Barret Ave.
Louisville, 40204
502-584-4206
Res. 5101 Cherry Valley Ln.
Prospect, 40059
502-228-3018
ORS 1602 72

Logsdon, Martin T.
Cindi
Ofc. 1135 Medicol Arts Bldg.
Louisville, 40217
502-452-9567
Res. 423 Fairlown Rd.
Louisville, 40207
502-895-7292
D 1602 75

Logsdon, Jr., Joseph E.
Jonn
Ofc. 1115 Red Fox Rd.
Louisville, 40205
502-583-0909
Res. 1115 Red Fox Rd.
Louisville, 40205
502-895-7981
ANES 1612 71

Long, Robert C.
Sonjo
Ofc. 3333 Bordstown Rd.
Louisville, 40218
502-451-7875
Res. 8001 Westover Dr.
Prospect, 40059
502-228-8813
OBG 1602 40

Lopecillo, Goldelina
Ofc. 1221 Wellington Ploce
Louisville, 40207
502-562-7112
Res. 1221 Wellington Place
Louisville, 40207
502-897-5279
ANES 8501 68

Lopez, Edgar A.
Cynthio
Ofc. Audubon Medicol Plaza
Suite L 11
Louisville, 40217
502-636-9196
Res. 605 Bedfordshire Road
Louisville, 40222
502-425-8922
PS 6402 67

Lordon, Robert E.
Chorlene
Ofc. 500 So. Floyd
Louisville, 40202
502-588-5757
Res. 1223 Summit Avenue
Louisville, 40204
502-459-5434
IM 802 62

Love, Selby V.
Louise
Ofc. 511 Club Ln.
Louisville, 40207
Res. 511 Club Ln.
Louisville, 40207
502-895-7586
PD 1602 38

JEFFERSON

Lowenbraun, Stanley
Ethel
Ofc. 802 Doctors Office Bldg. Louisville, 40202 502-582-3735
Res. 9921 Covered Bridge Rd. Prospect, 40059 502-228-1429
IM 1602 67

Lowrey, Jr., Ferrell C.
Gerre
Ofc. Suite 3A 4001 Dutchmons Ln. Louisville, 40207 502-897-6313
Res. 3805 Hill Creek Rd. Louisville, 40220 502-897-6313
C 1602 53

Lucas, Charles T.
Morgoret
Ofc. 6205 Orion Rd. Louisville, 40222 502-585-2241
Res. 6205 Orion Rd. Louisville, 40222 502-423-1697
PATH 66

Lucas, Aaron E.
Betty
Ofc. Suite 1226 Medicol Arts Louisville, 40217 502-459-8825
Res. 1486 Cherokee Rood Louisville, 40204 502-459-5384
SU 1602 74

Lykins, Robert W.
Elise
Ofc. 4005 DuPont Circle Surgecenter Louisville, 40207 502-897-7401
Res. 2944 Lexington Rood Louisville, 40206 502-895-4712
ANES 3501 46

Lynch, Theodore N.
Coroline
Ofc. 354 Medicol Towers So. Louisville, 40202 502-585-3297
Res. 2225 Villoge Drive Louisville, 40205 502-585-3297
IM 1602 58

Mack, H. Burl
Ofc. 304 Mt. Mercy Dr. Pewee Volley, 40056 502-241-8611
Res. 10305 Stotio Lynn Ct. Louisville, 40223 502-245-6933
FP 412 38

MacMillan, Duncan R.
Normo
Ofc. UL HSC Louisville, 40292 502-562-8828
Res. 2102 Cormorgo Rd. Louisville, 40207 502-895-2811
PD 5904 55

Macon, III, James B.
Coroline S.
Ofc. 548 Borberry Ln. Louisville, 40206 502-636-9130
Res. 548 Borberry Lone Louisville, 40206 502-897-6417
NS 2001 74

Magallon, Robert A.
Beo
Ofc. 1110 Heyburn Bldg. Louisville, 40202 502-584-2353
Res. Route 5 Shelbyville, 40065 502-584-7758
SU 2402 49

Maguire, Herbert T.
Zonio
Ofc. G-34 Medicol Arts Bldg. Louisville, 40217 502-451-1448
Res. P.O. Box 6828 Louisville, 40206 502-897-5421
ANES 6001 57

Mahaffey, Daniel E.
Corole
Ofc. 2850 Lexington Rd. Louisville, 40206 502-587-6991
Res. 2850 Lexington Louisville, 40206 502-895-6505
TS 1602 46

Mahaffey, J. Herman
Evelyn
Ofc. 560 Sunnyside Dr. Louisville, 40206 502-423-2276
Res. 560 Sunnyside Dr. Louisville, 40206 502-895-6840
SU 1602 46

Mahaffey, Logan M.
Anne Corter
Ofc. Spring View Hosp. Lebonon, 40033 502-692-3161
Res. 6004 Rodes Ct. Louisville, 40222 502-426-1711
PATH 1602 59

Mahan, J. Marshall
Mory Evelyn
Ofc. Boptist Eost Doctors Bldg. #308 Louisville, 40207 502-895-2489
Res. 737 Broeview Rd. Louisville, 40206 502-895-4145
OBG 1602 61

Mahl, Charles F.
Louonne
Ofc. 224 E. Broodwoy Louisville, 40202 502-589-1500
Res. 3809 Strotford Lone Louisville, 40207 502-893-0115
OPH 1242 77

Maier, Godfrey G.
Mortho
Ofc. 405 Heyburn Bldg. Louisville, 40202 502-587-6919
Res. 6305 Glen Hill Rd. Louisville, 40222 502-425-5747
OTO 1602 50

Makk, Laszlo
Ofc. St. Anthony Hosp. Louisville, 40204 502-587-1161
Res. 2509 Seneco Volley Rd. Louisville, 40205 502-458-4985
PATH 3103 60

Maldonado, Alberto R.
Ofc. 601 So. Floyd St. Suite 700 Louisville, 40202 502-583-8303
Res. 214 Lynnwood Drive Jeffersonville, IN, 47130 812-948-1720
SU

Mallik, Balwant S.
Ofc. P.O. Box 1076 Jeffersonville, IN, 47130
Res. P.O. Box 1076 Jeffersonville, IN, 47130
P 53

Mann, Nirmal S.
Surinder
Ofc. 800 Zorn Ave. Louisville, 40202 502-895-3401
Res. 9105 Denington Dr. Louisville, 40222 502-425-1808
GE 5088 62

Marchal, Gilbert E.
Ann
Ofc. 5135 Dixie Hwy. Louisville, 40216 502-447-3242
Res. 3900 Wilderness Trail Louisville, 40299 502-267-8412
FP 1602 76

Marcum, Aaron T.
Noncy
Ofc. 622 Cordinol Ln. Lexington, 40503
Res. 622 Cordinol Lone Lexington, 40503 606-277-5169
PD 1602 51

Marcum, Sidney G.
Greto
Ofc. 224 E. Broodwoy Louisville, 40202 502-587-9660
Res. 16511 Brodbe Rd. Fisherville, 40023 502-587-9660
IM 1602 59

Mardis, Richard E.
Betty
Ofc. P.O. Box 385 Compbellsville, 42718
Res. P.O. Box 385 Compbellsville, 42718 502-789-2169
IM 1602 44

Marshall, Jennings B.
Altono
Ofc. 7249 Heotherly Sq. Louisville, 40222
Res. 7249 Heotherly Sq. Louisville, 40222 502-425-2624
OBG 1602 36

Marshall, Thomas M.
Noncye
Ofc. 3950 Kresge Way Room 202 Louisville, 40207 502-897-2579
Res. 118 Arrowheod Rd. Louisville, 40207 502-895-3117
NS 1602 41

Marshall, Thomas R.
Ann
Ofc. 3004 Toylorsville Rd. X-Roy Louisville, 40205 502-456-6145
Res. 25 S. Sheridan Rd. Louisville, 40220 502-452-2377
R 1602 55

Marshall, James A.
Joyce
Ofc. #6 Triongle Medicol Ctr. Louisville, 40220 502-459-4567
Res. 2604 Valley Visto Rd. Louisville, 40205 502-459-4111
FP 1602 59

Marshall, Joseph C.
Lindo
Ofc. 310 Medical Towers Bldg. Louisville, 40202 502-584-8301
Res. 3211 Boxhill Ln. Louisville, 40222 502-897-3277
SU 1602 64

Marshall, Ernest W.
Ofc. 601 So. Floyd St. #503 Louisville, 40202 502-585-5325
Res. 4121 Browns Ln., A-1 Louisville, 40220 502-451-3419
OBG 1602 76

JEFFERSON

Martin, Roy A.
Betsy
Ofc. Suburban Med. Pl.
Louisville, 40207
502-893-0491
Res. 5612 Apache Rd.
Louisville, 40207
502-895-3633
OTO 1602 44

Martin, Homer B.
Caroline
Ofc. Suite 5
9112 Leesgate Rd.
Louisville, 40222
502-425-5400
Res. 1027 East Franklin
Louisville, 40206
502-589-9088
P 1602 51

Martin, Denis G.
Maureen
Ofc. 7604 Wolf Pen Branch Rd.
Prospect, 40059
502-587-9660
Res. 7604 Wolf Pen Bronch Rd.
Praspect, 40059
502-228-0944
IM 5088 60

Martin, Larry Edward
Pamelo
Ofc. Audubon Medicol Plazo
Suite 230
Louisville, 40217
502-636-3417
Res. 9107 Fairmount Rd.
Louisville, 40291
502-239-1783
IM 1602 76

Martinez, Serge A.
Linda
Ofc. 700 Childrens Foundotian
Bldg.
Louisville, 40202
502-588-6994
Res. 8305 Salford Woy
Louisville, 40222
502-423-9590
OTO 902 69

Masden, Ronald R.
Becki
Ofc. 530 So. Jockson St.
3rd Floor
Louisville, 40202
502-589-4668
Res. Deepwoad
Mount Woshington, 40047
502-955-7354
C 1602 65

Masri, Zahi H.
Susan
Ofc. 718 Medical Towers Bldg.
Louisville, 40202
502-584-6413
Res. 5308 Indian Crest
Louisville, 40207
502-895-0124
TS 5088 60

Masterson, Byron J.
Ofc. 323 E. Chestnut
Suite 307
Louisville, 40202
502-588-5814
Res. 6328 Upper River Rd.
Louisville, 40027
502-228-5851
OBG 2402 58

Matallana, Jorge E.
Lucille
Ofc. 400 Groy St.
Louisville, 40202
502-588-4087
Res. 4405 Shenondaoh Dr.
Louisville, 40222
502-426-4674
PUD 6204 54

Mathew, Shiela
Thyparambil
Ofc. P.O. Box 35070
Louisville, 40232
502-562-7112
Res. 11205 Newstone Ct.
Louisville, 40223
502-244-0827
ANES 7018 72

Mathews, III, Mack R.
Karen
Ofc. 9007 Hurstwaod Ct.
Louisville, 40222
502-896-2890
Res. 9007 Hurstwoad Caurt
Louisville, 40222
502-425-3385
EM 1602 76

Matibag, Victor P.
Angie
Ofc. 1035 Woll St.
Room 207
Jeffersonville, IN 47130
812-282-1351
Res. 9202 Tiverton Way
Louisville, 40222
812-282-1351
N

Mattox, Alfred E.
Vicki
Ofc. RR 2, Box 507
New Albony, IN 47150
502-584-8988
Res. Route 2, Box 507
New Albony, IN 47150
812-948-2755
ANES 1602 57

Maurer, Joseph E.
Ofc. 204 Medical Towers
Louisville, 40202
502-587-9649
Res. 12206 Osoge Road
Anchorage, 40001
502-245-0280
U 2001 43

Mavroudis, Constantine
Martha S.
Ofc. 700 Children
Faundation Bldg.
Louisville, 40202
502-588-5198
Res. 1400 Willaw Ave. #1604
Louisville, 40204
502-451-9639
SU 4501 73

Maxwell, Edward N.
Ethelyn
Ofc. 1 Auduban Plaza Dr.
Louisville, 40217
502-636-7473
Res. 3300 Oriale Dr.
Louisville, 40213
502-636-1464
R 4504 44

May, Russell T.
Kathryn
Ofc. 4102 Crestview Rd.
Louisville, 40207
502-636-5163
Res. 4102 Crestview Rd.
Louisville, 40207
502-897-6674
IM 1612 68

Maya, Gaston N.
Reina
Ofc. 5604 Coachgate Wynde
Louisville, 40207
502-282-4351
Res. 5604 Caach Gate Wynde
Louisville, 40207
502-896-6844
FP 6301 47

Maya, Mario
Vicki A.
Ofc. 115 Crestwood Ave.
Louisville, 40206
Res. 319 N. Bonner Ave.
Louisville, 40207
502-895-7164
EM 1602 79

McAllister, Donald T.
Raseanne
Ofc. 4130 Dutchmans Ln.
3rd Flaar
Louisville, 40207
502-897-1794
Res. 1000 Bellewood Rd.
Ancharage, 40223
502-245-9885
ORS 1612 65

McAllister, Roseanne G.
Danald
Ofc. 1000 Bellewood Rd.
Ancharage, 40223
Res. 1000 Bellewood Rd.
Louisville, 40223
ANES 1612 65

McCall, Michael W.
Marjarie
Ofc. 552 Medical Towers So.
Louisville, 40202
502-583-1749
Res. 209 Segaya Raad
Louisville, 40207
502-896-9943
D 1602 76

McClane, John R.
Pat
Ofc. Wythe Co. Comm. Hasp.
Wytheville, VA, 24382
703-228-2181
Res. Peppers Ferry Rd.
Wytheville, VA, 24382
703-637-3548
R 1612 65

McClendon, Robert L.
Betty
Ofc. 801 Borret Ave.
Louisville, 40204
502-585-5311
Res. 3001 Dones Holl Ct.
Louisville, 40206
502-896-6256
IM 1602 45

McClure, G. David
Gwen
Ofc. 108 MacArthur Dr.
Louisville, 40207
502-896-8879
Res. 3706 Lime Kiln Ln.
Louisville, 40222
502-425-2555
OPH 1602 46

McCoy, Martha T.
Terrence L.
Ofc. 268 Medicol Towers Sa.
Louisville, 40202
502-583-5948
Res. 1367 Sauth Fourth St.
Louisville, 40208
502-634-0477
SU 1602 76

McCrocklin, George W.
Darothy
Ofc. 801 Barret Ave.
Louisville, 40204
502-585-3271
Res. 520 Cornell Pl.
Louisville, 40207
502-897-3996
ORS 1602 50

McGaffee, Dana Joy
Ofc. 2120 Newburg Rd.
Louisville, 40205
502-459-8702
Res. 9 Dupont Way #6
Louisville, 40207
502-896-6008
P 4106 77

McGavic, John Dickinson
Brendo
Ofc. 4001 Dutchman's Ln.
Louisville, 40207
502-897-1839
Res. 11501 Volley View Rd.
Louisville, 40223
502-245-2677
ANES 2001 61

McGlinn, Joan F.
Ofc. 4523 Bardstown Rd.
Louisville, 40218
502-896-2890
EM 3707 73

JEFFERSON

McGrath, Robert J.
Frances
Ofc. 5141 Dixie Hwy.
Louisville, 40216
502-448-7818
Res. 13988 Paplar Lane
Louisville, 40299
502-244-1363
OBG 1602 57

McKeown, John M.
Mary Ellen
Ofc. 601 So. Floyd St.
Louisville, 40202
502-585-5415
Res. 2800 Rainbow Drive
Louisville, 40206
502-897-6077
IM 1243 71

McKiernan, Jr., James E.
Sara
Ofc. 3 Auduban Med. Plaza
Lauisville, 40217
502-583-0696
Res. 2207 Dauglas Woad Ct.
Louisville, 40205
N 1602 75

McLain, Jr., Lee Wm.
Ofc. UL
Louisville, 40292
502-588-7981
Res. 1705 Sweetbriar Ln.
Lauisville, 40207
502-893-8974
N 3207 61

McLaughlin, Martha D.
Ofc. 2120 Newburg Rd. #306
Louisville, 40205
502-459-6320
Res. 2504 Saratoga Dr.
Louisville, 40205
502-451-9815
P 1602 75

McLaughlin, II, Arthur J.
Ofc. 323 E. Chestnut
Louisville, 40202
502-895-3401
Res. 3035 Beals Branch Dr.
Louisville, 40206
502-896-0034
R 1602 76

McMahon, James R.
Esther
Ofc. 810 Barret Ave.
Louisville, 40204
502-583-4841
Res. 6900 Foxcroft
Prospect, 40059
502-228-8405
R 1612 65

McMartin, Daniel D.
Maxine
Ofc. Ambulatory Care Bldg. UL
Louisville, 40202
502-589-4668
Res. 7702 Westport Rd.
Louisville, 40222
502-425-2470
C 3106 65

McMurry, Gorden T.
Mary Glenn
Ofc. Doctars Office Bldg.
Louisville, 40202
502-589-2114
Res. 13306 Creekview Rd.
Praspect, 40059
OTO 1612 65

McNeely, James D.
Wanda Ja
Ofc. 1532 Cherokee Rd.
Louisville, 40205
502-589-8601
Res. 1532 Cherakee Rd.
Lauisville, 40205
502-454-0987
P 1602 65

McQuady, Jr., Robert L.
Yvanne
Ofc. P.O. Box 24081
Satellite
Louisville, 40224
502-636-9109
Res. 2508 Valley Vista Rd.
Lauisville, 40205
OBG 1602 69

Meckler, Roy J.
C. Lynn
Ofc. Dactar's Office Bldg.
Louisville, 40202
502-589-6177
Res. 6211 Deep Creek Ct.
Praspect, 40059
502-228-3534
N 3406 68

Melo, Julio C.
Glaria
Ofc. 403 Childrens
Foundation Bldg.
Lauisville, 40202
502-585-5413
Res. 11700 Running Creek Rd.
Louisville, 40223
502-245-3350
IM 6201 70

Mercer, Charles B.
Jonne
Ofc. G-34 Medical Arts Bldg.
Lauisville, 40217
502-451-1448
Res. 10613 Preston Hwy.
Louisville, 40229
502-964-8500
ANES 1602 64

Meyers, James A.
Ofc. Audubon Hosp.
Lauisville, 40217
502-636-7474
Res. 3323 Oriale Dr.
Lauisville, 40213
502-634-4592
R 1705 60

Mickler, Andrew S.
Ofc. 4010 Dupont Circle 370
Lauisville, 40202
GP 1602 77

Millan, Joselito L.
Joyce
Ofc. 1035 Wall St. #202
Jeffersanville, IN, 47130
812-283-5739
Res. 10001 Highway 60
Sellersburg, IN, 47172
812-246-5170
NS 8505 64

Miller, Alfred O.
Martha
Ofc. Medical Towers So. B-80
Lauisville, 40202
502-583-0269
Res. 581 Sunset Rd.
Louisville, 40206
502-895-2185
R 1602 39

Miller, John W.
Anne
Ofc. 4001 Dutchmans Ln.
#5-G
Louisville, 40207
502-897-1593
Res. 7302 Glen Arbar Raad
Louisville, 40222
502-425-3532
ORS 1602 51

Miller, Milton F.
Lydia
Ofc. 662 Medical Towers So.
Lauisville, 40202
502-583-4475
Res. 565 Barberry Lane
Louisville, 40206
502-895-4556
IM 1602 54

Miller, Elgan L.
Suzanne
Ofc. Prof. Arts Bldg.
New Albany, IN, 47150
812-945-0268
Res. 2602 Stover Dr.
New Albany, IN, 47150
812-948-9935
OBG 1602 71

Mills, Judy C.
Johnny
Ofc. Nortan Hosp.
Louisville, 40202
502-562-7212
Res. 10305 Plains Ct.
Louisville, 40223
502-244-1875
PD 1602 77

Minish, Lawrence T.
Virginia
Ofc. 6 River Hill Rd.
Lauisville, 40207
Res. 6 River Hill Rd.
Lauisville, 40207
502-896-0604
IM 1602 36

Mitchell, Bruce B.
Daris
Ofc. 503 Leicester Circle
Louisville, 40222
Res. 503 Leicester Circle
Lauisville, 40222
502-426-3674
OBG 1602 39

Mitchell, William C.
Helen
Ofc. 220 Audubon Medical Plaza
Louisville, 40217
502-636-9226
Res. 1005 Doric Circle
Louisville, 40205
502-897-3830
ORS 1602 52

Mitchell, Wilber A.
Ofc. Medical Arts Bldg.
Lauisville, 40217
502-452-9098
Res. 500 Twinbraak Rd.
Louisville, 40207
502-896-8920
P 1602 54

Mitchell, Edward L.
Daris
Ofc. P.O. Box 32800
Louisville, 40292
502-560-2279
Res. 6110 Tidewater Ct.
Prospect, 40059
502-228-8967
OM 3201 59

Mitchell, Richard A.
Susan
Ofc. 3950 Kresge Way
Lauisville, 40207
502-897-5139
Res. 12808 N. Osage
Anchorage, 40223
502-893-2487
SU 1602 72

Mitzlaff, Louis
Sara
Ofc. 140 Sagamare Rd.
Louisville, 40207
502-584-6323
Res. 140 Sagamore Rd.
Louisville, 40207
502-895-1138
IM 1602 37

Molloy, III, James F.
Linda
Ofc. 903 Doctors'
Office Bldg.
Lauisville, 40202
502-583-1781
Res. 6107 Innes Trace
Louisville, 40222
502-426-9368
D 1602 58

Monroe, Robert F.
Kathrine
Ofc. 510 Penwaod Rd.
Lauisville, 40206
Res. 510 Penwood Rd.
Lauisville, 40206
502-895-4716
OBG 2402 31

Moore, William R.
Libby
Ofc. 210 Narth Hite Ave.
Lauisville, 40206
502-896-8448
Res. 210 Narth Hite Ave.
Lauisville, 40206
502-896-6433
GP 1602 31

JEFFERSON

Moore, Herman R.
Borboro
Ofc. 850 Borret Ave.
#204
Louisville, 40204
502-584-8341
Res. 1031 Alto Visto Rd.
Louisville, 40205
502-893-2728
SU 1602 44

Moore, Clyde T.
Morie
Ofc. 9131 Fern Creek Rd.
Fern Creek, 40291
502-239-3228
Res. 8607 Beuloh Church Rd.
Louisville, 40291
502-239-8447
FP 1602 45

Moore, Condict
Coroline
Ofc. Jomes Brown
Concer Ctr. 316
Louisville, 40202
502-588-7870
Res. 24 River Hill Rd.
Louisville, 40207
502-895-4767
SU 3101 42

Moore, Gerald L.
Beverly
Ofc. 3323 Med. Arts Bldg.
Louisville, 40217
502-451-0081
Res. 2424 Dundee Rd.
Louisville, 40205
502-451-0081
P 1005 62

Moore, Patrick J.
Ofc. 1928 Bonnycostle Ave.
Louisville, 40205
P 4805 74

Moore, Jr., Roy H.
Ruth
Ofc. 304 Jorvis Ln.
Louisville, 40207
Res. 504 Jorvis Lone
Louisville, 40207
502-896-6652
SU 1602 39

Moorhatch, John M.
Morilee
Ofc. Bon Air Monor
2817 Del Rio Ploce
Louisville, 40220
502-458-9534
Res. 3020 Wellbrooke Rd.
Louisville, 40205
502-458-5926
FP 1602 51

Moran, Jr., Charles T.
Pot
Ofc. 3C Suburbon
Medicol Plozo
Louisville, 40207
502-897-0126
Res. 3014 Coloniol Hill Rd.
Louisville, 40207
502-456-4835
OPH 1602 68

Moreno, Mario J.
Enedelio G.
Ofc. UL, 530 So. Jockson
Louisville, 40292
502-588-5203
Res. 1818 Milburt Drive
Louisville, 40223
502-245-2322
FP 7901 80

Morgan, Kirk D.
Chorlotte
Ofc. 9105 U.S. 42
Prospect, 40059
502-228-0156
Res. 5421 Pownee Troil
Louisville, 40207
502-893-2993
FP 1602 71

Morgan, Jr., E. Byron
Genny
Ofc. 4122 Shelbyville Rd.
Louisville, 40207
502-893-0495
Res. 5408 Pownee Tr.
Louisville, 40207
502-897-6237
FP 1602 75

Morgan, Sr., Edgar B.
Kotherine
Ofc. 2708 Fronkfort Ave.
Louisville, 40206
502-895-5491
Res. 4614 Honford Lone
Louisville, 40207
502-897-1487
FP 1602 50

Morris, Charles W.
Morion
Ofc. 1169 Eostern Pkwy.
Suite 3443
Louisville, 40217
502-458-2363
Res. 2900 Avon Rd.
Louisville, 40220
502-454-5042
P 1320 40

Morris, Ralph C.
Lois
Ofc. 1921 W. Broodwoy
Louisville, 40203
502-774-8787
Res. 740 S. 44th St.
Louisville, 40211
502-772-2295
IM 803 50

Morris, Walter R.
Virginio
Ofc. 1237 Medicol Arts Bldg.
Louisville, 40217
502-451-6602
Res. 2305 Tuckoho Rd.
Louisville, 40207
502-893-7230
OPH 1602 55

Morris, John R.
Joon Elizobeth
Ofc. Suburban Medicol Plozo
Louisville, 40207
502-893-0159
Res. 6302 Crest Creek Ct.
Louisville, 40222
502-228-4723
OTO 3441 70

Morris, Jr., Charles F.
Borboro
Ofc. Suburbon Hosp. RAD
Louisville, 40207
502-636-7011
Res. 2501 Denhom Rd.
Louisville, 40205
502-451-2682
R 1602 69

Morrison, Charles R.
Kotherine
Ofc. 506 Fincostle Bldg.
Louisville, 40202
502-587-8471
Res. 504 Rolling Lone
Louisville, 40207
502-893-3044
IM 1612 72

Morrissey, Robert W.
Florence
Ofc. 6504 Gunpowder Ln.
Prospect, 40059
502-587-1161
Res. 6504 Gunpowder Lone
Prospect, 40059
502-228-3216
PATH 3103 48

Morrow, Philip G.
Mory
Ofc. Suburbon Med. Plozo
Suite LL-E
Louisville, 40207
502-895-4263
Res. 3710 Quoil Hollow Ct.
Louisville, 40222
502-426-8079
IM 1602 72

Moses, William M.
Ofc. 909 Doctors
Office Bldg.
Louisville, 40202
502-583-5116
Res. 803 Greenspur Ln.
Louisville, 40207
502-895-9700
SU 4107 49

Mosley, Donald H.
Chorlotte
Ofc. 825 Borret Ave.
Louisville, 40204
502-584-2338
Res. 4025 St. Germaine Ct.
Louisville, 40207
502-897-3434
C 1602 58

Moss, James P.
Ofc. 250 E. Liberty St.
Louisville, 40202
502-583-7643
Res. 4002 Glenview Ave.
Glenview, 40025
502-897-3085
SU 1602 66

Moss, William E.
Suson
Ofc. 4500 Churchmon Ave.
#1A
Louisville, 40215
502-366-0392
Res. 474 Lightfoot Rd.
Louisville, 40207
502-893-2270
ORS 1602 72

Mowry, Stephen P.
Coredo
Ofc. 3950 Kresge Woy
Suite 204
Louisville, 40207
502-897-0639
Res. 7007 Fox Volley Ct.
Prospect, 40059
502-228-8029
IM 4105 68

Moyer, Ronald P.
Joyce
Ofc. 9822 Third St. Rd.
Louisville, 40272
502-937-6631
Res. 4800 Cossio Ct.
Louisville, 40207
502-895-6134
A 1320 68

Mudd, Joseph P.
Trudy
Ofc. 815 Eostern Blvd.
Clorksville, IN, 47130
812-232-4261
Res. 103 W. Rosewood Drive
Clorksville, IN, 47130
812-944-3755
FP 1602 54

Mudd, Lawrence R.
Peggy
Ofc. 2120 Newburg Rd.
Louisville, 40205
502-456-5307
Res. 1142 Rostevor Circle
Louisville, 40205
P 1602 66

Mukherji, Phatick K.
Chondro
Ofc. 1912 W. Broodwoy
Louisville, 40203
502-778-1619
Res. 1912 W. Broodwoy
Louisville, 40203
502-778-1619
PD 5088 46

Mukherji, Chandra
Photick
Ofc. 2801 W. Kentucky
Louisville, 40211
502-776-3488
Res. 3013 Murroy Hill Pike
Louisville, 40222
502-778-1619
OBG 5088 51

Mullen, Alvin B.
Ofc. 1708 Mt. Vernon Dr.
Ft. Wright, 41011
Res. 1708 Mt. Vernon Dr.
Ft. Wright, 41017
606-331-1786
PH 1602 25

JEFFERSON

Mullins, Fitzhugh
Lillion
Ofc. Medicol Towers
Louisville, 40202
502-585-4727
Res. 4314 Glenview Ave.
Glenview, 40025
502-896-8653
SU 4504 56

Murphy, Patrick J.
Morgoret
Ofc. 8032 Goringwood Ln.
Germontown, TN, 38138
901-528-5899
Res. 66 North Pouline
Memphis, TN, 38104
901-754-4501
FP 1602 52

Murphy, Jr., Joseph K.
Kothleen
Ofc. 9822 Third St. Rd.
Louisville, 40272
502-937-3864
Res. 612 Hotherleigh Ln.
Louisville, 40222
502-426-1752
GP 1612 74

Murray, Marvin
Shirley
Ofc. Generol Hosp.
Louisville, 40202
502-588-5518
Res. 734 Foirhill Dr.
Louisville, 40207
502-893-2673
PATH 2107 55

Murrow, Joseph T.
Cheri
Ofc. 115 Foirfox Ave.
Louisville, 40207
502-897-2514
Res. 3312 Trinity Rood
Louisville, 40206
502-897-5703
IM 1602 71

Nacke, Morris
Susonn
Ofc. St. Mory's Medicol
Plozo, Suite 1
Louisville, 40215
502-367-6137
Res. 5115 Down Drive
Louisville, 40216
502-448-8251
OPH 1602 73

Nagar, Chander M.
Ofc. 1900 Bluegross
St. Mory #300
Louisville, 40215
502-361-0105
Res. 5411 Pueblo Rood
Louisville, 40207
502-895-6454
C 5088 67

Nagaraju, Hirikati S.
Borboro
Ofc. 502-583-8303
Res. 2935 Goose Greek Rd.
Louisville, 40222
502-426-6190
PD 7027 65

Nall, Michael S.
Jody
Ofc. 4010 Dupont Cir.
Louisville, 40207
502-895-3424
Res. 903 Flotrock Rood
Louisville, 40223
502-245-0116
A 1612 65

Narayan, Vaduvur S.
Kolindi
Ofc. 2902 Glen Hill Circle
Louisville, 40222
502-566-5502
Res. 2902 Glenhill Circle
Louisville, 40222
502-423-9267
OM 7010 69

Nash, William N.
Jon
Ofc. 213 Blonkenboker Ln.
Louisville, 40207
502-897-1839
Res. 213 Blonkenboker Lone
Louisville, 40207
502-893-7198
ANES 1602 52

Nave, Richard R.
Jeon
Ofc. 801 Borret Ave.
Louisville, 40204
502-584-6665
Res. Route 2, Box 598
Bordon, IN, 47106
502-584-6665
OTO 3501 58

Nawab, Syed M.
Sohro
Ofc. 756 Medicol Towers
Louisville, 40202
502-589-7088
Res. 7609 Old Orchord Court
Louisville, 40222
502-426-0733
TS 7007 66

Nedelkoff, Bogdan
Ofc. 1850 Stote St.
New Albony, IN, 47150
PATH

Needleman, Michael D.
Mindy
Ofc. 7512 Old Shepherdsville Rd.
Louisville, 40219
502-968-6226
Res. 1000 Burning
Springs Drive
Louisville, 40223
502-968-6226
FP 1206 72

Nehil, John L.
Jon
Ofc. 640 Audubon Med. Pl.
Louisville, 40217
502-636-9118
Res. 1922 Strothmoor Blvd.
Louisville, 40205
502-451-4647
ORS 2101 74

Nell, George W.
Corol Ann
Ofc. Suite 210
#3 Aud. Med. Plozo
Louisville, 40217
502-636-2841
Res. 3910 Poyne-Koehler Rd.
New Albony, IN, 47150
812-948-9119
U 1602 71

Nelson, David
Ofc. 1900 Alfresco Ploce
Louisville, 40205
Res. 1900 Alfresco Ploce
Louisville, 40205
502-454-3775
FP 1602 43

Nestor, Michael D.
Ofc. 612 Medicol Towers No.
Louisville, 40202
502-584-8988
Res. 1118 Ridge Lime Drive
Louisville, 40207
502-896-2265
ANES 1612 78

Neustadt, David H.
Corolyn
Ofc. 328 Medicol Towers So.
Louisville, 40202
502-585-4163
Res. 216 Smithfield Rood
Louisville, 40207
502-895-9392
IM 1602 50

Nichol, Tom D.
Anne
Ofc. 520 Doctors Office Bldg.
Louisville, 40202
502-584-2139
Res. 404 Winton
Louisville, 40206
502-895-6922
PS 4106 63

Nichols, George R.
Ofc. 2305 Villoge Dr.
Louisville, 40205
502-772-1822
Res. 2305 Villoge Drive
Louisville, 40205
502-459-0899
GP 1602 46

Nichols, II, George R.
Ofc. MDR Bldg. UL #206
Louisville, 40202
502-588-5587
Res. 1827 Fleming Rood
Louisville, 40205
502-454-4276
PATH 1602 72

Nightingale, David S.
Potricio
Ofc. 334 Medicol Towers So.
Louisville, 40202
502-587-6991
Res. 401 Jorvis Lone
Louisville, 40207
502-895-5335
TS 1602 56

Noel, Robert A.
Connie
Ofc. 3612 Lexington Rd.
Louisville, 40207
502-897-1871
Res. 11904 Log Cobin Lone
Louisville, 40223
502-425-1431
FP 1602 65

Nolan, Robert B.
Korin
Ofc. 3606 Klondike Ln.
Louisville, 40218
502-459-9444
Res. 2301 Groy Fox Rood
Louisville, 40205
502-451-6062
GP 1602 45

Nolan, Edwin W.
Helen
Ofc. Prof. Bldg. Eost
Louisville, 40220
502-459-0620
Res. 3003 Piedmont Drive
Louisville, 40205
502-458-7614
OPH 1602 53

Nold, Robert L.
Arlene
Ofc. 5601 S. 3rd St.
Louisville, 40214
502-361-8802
Res. 51 Hill Rood
Louisville, 40204
502-451-3389
FP 1602 72

Nolph, Michael B.
Borboro A.
Ofc. 601 S. Floyd
Louisville, 40202
502-583-8303
Res. 808 Col. Anderson Pkwy.
Louisville,
502-426-5946
OTO 2101 74

Nunnelly, III, Sherrell
Ofc. 1712 Old South Pork Rd.
Louisville, 40219
502-896-2890
Res. 1712 Old South Pork Rd.
Louisville, 40219
EM 1602 72

Nussbaum, Alan M.
Shoron
Ofc. 3101 Breckinridge Ln.
Louisville, 40220
502-456-5522
Res. 1632 Dunborton Wynde
Louisville, 40205
502-456-4427
D 1602 71

O'Brien, Ethel H.
Ofc. 134 N. Peterson Ave.
Louisville, 40206
Res. 134 N. Peterson Ave.
Louisville, 40206
502-895-1816
P 1602 33

O'Brien, John D.
Jeon
Ofc. 670 Medicol Towers So.
Louisville, 40202
502-583-8843
Res. 141 West Wind Rood
Louisville, 40207
502-897-0950
IM 1602 67

O'Brien, James O.
Donna
Ofc. 1930 Bishop Ln.
#502
Lauisville, 40218
502-896-2890
Res. 315 Alcott Raod
Louisville, 40207
502-895-5748
EM 1602 76

O'Connor, Robert R.
Philomeno
Ofc. 2120 Newburg Rd.
Suite 400
Louisville, 40205
502-451-2474
Res. 2907 Falmouth Drive
Louisville, 40205
502-456-1317
P 1602 62

Oberst, Charles R.
Narma
Ofc. 404 Medicol Towers Na.
Louisville, 40202
502-589-BABY
Res. 3002 Danes Hall Court
Louisville, 40206
502-893-5843
OBG 1602 60

Oblander, Jr., Earnest F.
Betty
Ofc. 101 Oxford Place
Louisville, 40207
502-895-9411
Res. 4200 Waadstone Way
Louisville, 40222
502-228-2046
FP 1602 63

Odulio, Benito V.
Brunhilda
Ofc. RFD 2, Hwy. 60 Eost
Mitchell, IN, 47446
812-849-3612
Res. Route #2
Mitchell, IN, 47446
812-849-4421
SU 8502

Odulio, Brunhilda G.
Benito V.
Ofc. RFD 2, Hwy. 60 East
Mitchell, IN, 47446
812-849-3612
Res. Route #2
Mitchell, IN, 47446
812-849-4421
IM 8502 59

Ogden, Owen S.
Elida
Ofc. 615 Fincostle Bldg.
Louisville, 40202
502-585-2377
Res. 418 Mockingbird Hill Rd.
Louisville, 40207
502-893-7901
PD 2001 35

Ogden, Lynn L.
Karen C.
Ofc. Jewish Hosp.
Louisville, 40202
502-587-4330
Res. 3703 Ten Broeck Way
Lauisville, 40222
502-425-6403
PATH 1001 57

Olash, F. Albert
Jane
Ofc. 4-F Suburban
Medical Bldg.
Louisville, 40207
502-897-0146
Res. 2003 Newmarket Drive
Lauisville, 40222
502-425-5283
IM 3702 45

Oldham, William E.
Betty
Ofc. 3950 Kresge Woy
Louisville, 40207
502-897-0287
Res. 548 Borberry Lone
Lauisville, 40206
502-896-9533
OBG 1602 37

Oliver, William J.
Jeanie
Ofc. 766 Medical Towers-Sa.
Louisville, 40202
502-585-4114
Res. 2200 River Bluff
Lauisville, 40207
502-895-2221
SU 1602 57

Olson, Naven M.
Ruth Ann
Ofc. 4010 Dupont Circle
Suite 225
Louisville, 40207
502-893-2510
Res. 9536 Wessex Place
Lauisville, 40222
502-425-4281
ANES 1403 47

Olson, Larry W.
Ofc. 721 Executive Park
Louisville, 40207
Res. 8115 Lake Avenue
Louisville, 40222
P 2204 77

Olson, William H.
Shirley
Ofc. UL Neuralagy
Lauisville, 40292
502-588-7981
Res. Univ. of Lau./Neurology
Louisville, 40292
502-228-1438
N 2001 65

Oropilla, Teresita B.
Ricardo
Ofc. 800 Zorn Ave.
Louisville, 40202
502-895-3401
Res. 2517 Stanehurst Drive
Louisville, 40222
502-425-4660
P 8507 56

Osborne, Mary L.
Ofc. 216 Heyburn Bldg.
Lauisville, 40202
502-584-5361
Res. 1020 Watterson Trail
Louisville, 40299
IM 1602 63

Overstreet, Sam A.
Irma
Ofc. 870 Medical Towers So.
Lauisville, 40202
502-583-1621
Res. 2536 Trevilion Way
Louisville, 40205
502-458-2231
IM 1602 23

Overstreet, A. Evan
Joanne
Ofc. 870 Medicol Towers
Louisville, 40202
502-583-1621
Res. 5801 Dunraven Court
Louisville, 40222
502-426-4389
IM 1602 55

Overstreet, Robert G.
Ofc. 870 Medicol Towers
Louisville, 40202
502-583-1621
IM 1602 57

Owen, Lafayette G.
Ofc. Medicol Towers Sa. 554
Lauisville, 40202
502-583-1749
Res. 2412 Longest Avenue
Lauisville, 40204
502-459-3037
D 1602 61

Owens, Jack W.
Jean
Ofc. G-34 Medical
Arts Bldg.
Louisville, 40217
502-451-1448
Res. 3113 Sara Avenue
Lauisville, 40213
502-635-5570
ANES 1602 58

Pahk, Elizabeth Y.
Frederick
Ofc. 4001 Dutchmons Ln.
Louisville, 40207
502-897-1839
Res. 3306 Brenner Poss
Lauisville, 40222
502-426-2197
ANES 7607 47

Pajo, Jr., Fernando C.
Darlene
Ofc. 5135 Dixie Hwy.
Suite 26
Lauisville, 40216
502-447-7214
Res. 435 Blankenbaker Lane
Louisville, 40207
502-896-4329
PUD 8505 61

Pal, Eugene J.
Anno
Ofc. 5359 New Cut Rd.
Lauisville, 40214
Res. 5359 New Cut Road
Louisville, 40214
PUD 5088 28

Palacio, Jose M.
Carmen Polacio
Ofc. 1430 Dellwoad Dr.
Lauisville, 40216
502-361-2405
Res. 1430 Dellwood Dr.
Louisville, 40216
502-361-2405
P 6301 45

Palmer, Lee
Donna Mai
Ofc. 518 Medical Towers
Louisville, 40202
502-584-0247
Res. 5801 Creighton
Hill Road
Louisville, 40207
502-893-3061
PD 1602 23

Pape, Richard C.
Carolyn
Ofc. 2528 Broadmeade Rd.
Lauisville, 40205
502-637-8700
Res. 2528 Broodmeade
Lauisville, 40207
502-456-5088
PD 1602 70

Parker, James E.
Elsie
Ofc. University Hospitol
Pothology
Lauisville, 40202
502-588-5298
Res. 2714 Lamant Raod
Louisville, 40205
502-452-1879
PATH 1602 51

Parsley, William M.
Ofc. 704 Medical Towers Na.
Louisville, 40202
502-585-5249
Res. 6613 Foxcraft Rood
Louisville, 40059
502-228-4828
D 4106 69

JEFFERSON

Patel, Chandrakant C.
Torongini
Ofc. 200 E. Chestnut St.
Louisville, 40202
502-562-8812
Res. 12900 S. Pope
Lick Rood
Louisville, 40299
502-245-4239
PD 9401 66

Patel, Tarangini C.
Chondrokont
Ofc. 12900 S. Pope
Lick Rd.
Louisville, 40299
502-589-8110
Res. 9001 Loughton Lone
Louisville, 40222
502-425-4322
ANES 7004 66

Paxton, D. Geraldine
Ferrell
Ofc. 2707 Tucker Rd.
Louisville, 40299
502-499-8208
Res. Hill Creek Rood
Louisville, 40220
PD 1602 53

Peak, William P.
Potsie
Ofc. 402 Fincostle Bldg.
Louisville, 40202
502-583-9727
Res. 19 Eostover Court
Louisville, 40206
502-895-8370
IM 1602 52

Pearce, Charles E.
Clore
Ofc. 101 So. Hubbords Ln.
Louisville, 40207
502-896-8836
Res. 9108 U.S. 42
Prospect, 40059
502-228-4337
FP 1602 50

Pearce, Luther W.
Mory Sue
Ofc. 2120 Newburg Rd.
Suite 400
Louisville, 40205
502-456-1080
Res. Tuliphurst
Peewee Volley, 40056
502-241-7019
P 3103 55

Pedigo, George W.
Bernice
Ofc. 3950 Kresge Woy
Suite 204
Louisville, 40207
502-897-0639
Res. 142 Westwind Rood
Louisville, 40207
502-893-5889
IM 1602 38

Peeno, Douglas O.
Lindo
Ofc. 3807 Elmwood Ave.
Louisville, 40207
502-583-8834
Res. 3924 Gilmon Ave.
Louisville, 40207
502-895-9761
OBG 1602 76

Peisel, Francis J.
Jone
Ofc. Medicol Arts Bldg. 1234
Louisville, 40217
502-459-3760
Res. 1846 Trough Springs
Louisville, 40205
502-459-4208
OTO 3109 48

Pellman, Martin J.
Ofc. 4545 Bishop Ln.
Louisville, 40218
502-426-5426
Res. 4545 Bishop Lone
Louisville, 40218
502-459-9700
OBG 5907 74

Pence, Hobert L.
Morsho
Ofc. 464 Medicol Towers So.
Louisville, 40202
502-583-1427
Res. 9002 Nottinghom Pkwy.
Louisville, 40222
502-426-1621
A 3440 68

Pengvanich, Chaisak
Nunto
Ofc. 1500 So. 7th St.
Louisville, 40208
502-636-0516
Res. 201 Hidden Ook Ploce
Louisville, 40222
502-423-8122
IM 9202 68

Penner, Daniel B.
Virginio
Ofc. 658 Medicol Towers So.
Louisville, 40202
502-583-9011
GE 3101 67

Perellis, Maurice A.
Horriett Lynne
Ofc. 1169 Eostern Pkwy.
Louisville, 40217
502-451-0404
Res. 2311 Woodside Drive
Louisville, 40207
PD 1602 46

Perez, Antolin J.
Fronces
Ofc. 6603 Shelburn Dr.
Crestwood, 40014
502-955-6501
Res. 6603 Shelburn Drive
Crestwood, 40014
502-363-1940
FP 5088 61

Perlstein, Irving B.
Bobs
Ofc. 3333 Bardstown Rd.
Louisville, 40218
502-451-5805
Res. 5611 Apoche Rood
Louisville, 40207
502-896-4408
IM 3106 39

Peters, C. Kenneth
Rhodo
Ofc. 10407 Toylorsville Rd.
Jeffersontown, 40299
502-267-5456
Res. 1911 Hurstbourne Circle
Louisville, 40220
502-491-0809
FP 1602 60

Peterson, Gary H.
Corol
Ofc. 71 Indion Hills Tr.
Louisville, 40207
502-588-5875
Res. 71 Indion Hills Tr.
Louisville, 40207
502-896-0584
R 1602 72

Peterson, Rodney A.
FP 4215 74

Petro, George J.
Mory
Ofc. 1135 Medicol Arts Bldg.
Louisville, 40217
502-452-9567
Res. 6810 Old Brownsboro Rd.
Louisville, 40207
502-425-5568
SU 1320 33

Petry, John A.
Judy
Ofc. P.O. Box 91052
Fern Creek, 40291
502-239-2189
Res. 1747 Spring Drive
Louisville, 40205
502-452-1843
OBG 1602 50

Petty, William M.
Bobbie
Ofc. 9131 Fern Creek Rd.
Fern Creek, 40291
502-239-3228
Res. 5500 Felker Woy
Fern Creek, 40291
502-499-1464
FP 1602 52

Peveler, Michael L.
Pomelo
Ofc. Suite 610
Audubon Med. Plozo
Louisville, 40217
502-635-7455
Res. 4017 Woodstone Woy
Louisville, 40222
502-228-0921
FP 1612 64

Peyton, Lewis T.
Morie
Ofc. 2702 Lomont Rd.
Louisville, 40205
Res. 2702 Lomont Rood
Louisville, 40205
502-451-2100
IM 1602 32

Pfeifer, Michael A.
Cotherine B.
Ofc. VA Medicol Center
Zorn Ave.
Louisville, 40206
502-895-3401
Res. 1401 West Moody Lone
LoGronge, 40031
502-222-0623
IM 1602 73

Pfingst, Harry A.
Dorothy
Ofc. 4001 Dutchmons Ln.
3-C
Louisville, 40207
502-897-0126
Res. 199 Westwind Rood
Louisville, 40207
502-896-0166
OPH 1602 37

Phelps, Jerry A.
Joyce
Ofc. 4001 Dutchmons Ln.
5-C
Louisville, 40207
502-897-1839
Res. 6013 Innes Troce Rood
Louisville, 40222
502-425-4765
ANES 1602 61

Pickar, Daniel N.
Josephine
Ofc. 5800 Cooch Gote
Wynde #276
Louisville, 40207
Res. 5800 Cooch Gote
Wynde #276
Louisville, 40207
502-893-7436
PUD 4805 38

Pierce, Gene S.
Vicki K.
Ofc. 112 Professionol
Arts Bldg.
New Albony, IN, 47150
812-945-6676
Res. 22 Ridgewood Court
Floyds Knobs, IN, 47119
812-923-7238
FP

Pierce, Jr., Raymond E.
Jockie
Ofc. 760 Medicol Towers So.
Louisville, 40202
502-585-4170
Res. 8302 Shelbyville Rood
Louisville, 40222
502-426-5975
CRS 4701 69

JEFFERSON

Pietsch, John B.
Joonne
Ofc. 601 So. Floyd
Suite 700
Louisville, 40202
502-583-8303
Res. 5407 Pueblo
Louisville, 40207
SU 2101 72

Pike, Lucy G.
Tom
Ofc. Suite 2269
Med. Arts Bldg.
Louisville, 40217
502-456-5544
Res. 2217 Cherokee Pkwy.
Louisville, 40204
502-451-2359
P 1602 74

Pipkin, Fred
Doris
Ofc. 2221 Meodow Dr.
Louisville, 40218
502-451-0020
Res. 2903 Folmouth Drive
Louisville, 40205
502-458-4148
PD 4105 52

Pipkin, Doris
Fred
Ofc. 2903 Folmouth Dr.
Louisville, 40205
502-451-8288
Res. 2903 Folmouth Drive
Louisville, 40205
502-458-4820
FP 4105 51

Pisterman, Sergio
Mory
Ofc. 111 Eost Adoms St.
LoGronge, 40031
502-222-7144
Res. 3109 Donbury Ct.
Louisville, 40222
FP 5088 61

Pittman, Gregory L.
Potrice
Ofc. Audubon Med. Plozo, 350
Louisville, 40205
502-583-0696
Res. 7109 Fox Horbor Rd.
Prospect, 40059
502-228-5994
N 3425 76

Podoll, Ronald E.
Ofc. 2327 Bonnycostle Ave.
Louisville, 40205
502-459-0646
Res. 2327 Bonnycostle Avenue
Louisville, 40205
502-459-9028
EM 1602 72

Podruch, Philip E.
Ofc. 334 E. Broodwoy
Louisville, 40202
502-588-5331
Res. 809 River Dell Drive
Louisville, 40206
502-897-0148
PD 4806 47

Polk, Jr., Hiram C.
Wondo
Ofc. U of L.
Louisville, 40292
502-588-5442
Res. 18 River Hill Rood
Louisville, 40207
502-893-7047
SU 2001 60

Pope, Robert G.
Georgio A.
Ofc. 6401 Routt Rd.
Louisville, 40299
502-426-2261
Res. 6401 Routt Rood
Louisville, 40299
502-267-0128
IM 1602 74

Popham, Bernard I.
Betty
Ofc. 2358 Medicol Arts Bldg.
Louisville, 40217
502-459-6095
Res. 2344 Villoge Drive
Louisville, 40205
502-454-3943
IM 1602 47

Popham, Timothy B.
Elizobeth Anne
Ofc. 1169 Eostern Pkwy.
2358 MAB
Louisville, 40217
502-459-6095
Res. 1590 Porson Ploce
Louisville, 40205
502-451-7623
IM 1612 77

Portnoy, Jane Zuger
Morsholl
Ofc. Suite 3C
Sub. Med. Plozo
Louisville, 40207
502-897-0126
Res. 414 Jorvis Lone
Louisville, 40207
502-896-2676
OPH 1602 77

Post, Henry W.
Angie
Ofc. 825 Borret Ave.
Louisville, 40204
502-584-2338
Res. 2411 Dundee Rood
Louisville, 40205
502-458-6534
C 1701 52

Potts, Clinton R.
Borboro
Ofc. 234 Eost Groy St.
Louisville, 40202
502-897-0697
Res. 7811 Wolfe Pen Bronch Rd.
Prospect, 40059
502-228-0329
OBG 1602 55

Potts, Albert M.
Esther
Ofc. 301 E. Muhommod Ali
Louisville, 40202
502-588-5466
Res. 4303 Tolohi Woy
Louisville, 40207
502-895-7578
OPH 3406 48

Powell, Robert W.
Lois
Ofc. 224 E. Broodwoy
Suite 700
Louisville, 40202
Res. Louisville 40222
502-426-8692
PUD 1602 66

Powers, William H.
Mory
Ofc. Medicol Towers 608
Louisville, 40202
502-584-0289
Res. 6104 Innes Troce Rood
Louisville, 40222
502-425-6969
OBG 1602 55

Prada, Benjamin
Leonor
Ofc. Methodist Evongelicol Hosp.
Louisville, 40202
502-585-2241
Res. 712 Dones Holl Drive
Louisville, 40206
502-893-5432
SU 6204 48

Preston, Mary E.
Ofc. 1217 Gorvin Pl.
Louisville, 40203
502-588-5201
Res. 1217 Gorvin Ploce
Louisville, 40203
502-635-2974
FP 5088 80

Price, Ann C.
Ofc. Vonderbilt Univ. Hosp.
Noshville, TN 37232
615-322-3747
Res. Vonderbilt Univ., Rodiology
Noshville, TN 37203
R 1602 67

Puerto, Alfonso
Myriom
Ofc. 701 Bedfordshire Rd.
Louisville, 40222
502-893-1001
Res. 701 Bedfordshire Rd.
Louisville, 40222
502-425-4126
SU 6204 65

Pugh, William E.
Shirley
Ofc. 3950 Kresge Woy
Suite 305
Louisville, 40207
502-897-6492
Res. 205 Choctow Rood
Louisville, 40207
502-896-0708
OBG 1211 46

Quaife, Clarence E.
Mory Ann
Ofc. 2007 Bonnycostle
Louisville, 40205
502-451-3948
Res. 502 Hillside Ln.
Louisville, 40207
502-895-5061
FP 1602 43

Queen, Rogers L.
Judy
Ofc. 7600 Preston Hwy.
Louisville, 40219
502-969-4802
Res. 9708 Preston Hwy.
Louisville, 40229
502-969-4256
FP 1602 43

Quinby, Patricia M.
Peter Von Note
Ofc. 4602 Southern Pkwy.
Louisville, 40214
502-368-2543
Res. 3105 Gombiel Ct.
Louisville, 40205
502-456-6625
FP 1602 67

Radmacher, B. Frank
Pot
Pfc. 6356 Limewood Circle
Louisville, 40222
502-423-2275
Res. 6356 Limewood Circle
Louisville, 40222
502-426-4188
ADM 1602 44

Radtke, Norman D.
Chris Tino
Ofc. UL Ophtholmology
Louisville, 40292
502-588-5466
Res. 3717 Edmond Lone
Louisville, 40207
502-897-6337
OPH 2101 74

Raff, Martin J.
Ofc. U of L School of Med.
Louisville, 40292
502-588-5131
Res. 517 Ridgewood Rd.
Louisville, 40207
502-896-8605
IM 4202 65

Ramsey, William C.
Lindo
Ofc. 3600 Glenview Ave.
Glenview, 40025
502-589-4448
Res. 3600 Glenview
Glenview, 40025
502-425-2345
ORS 1001 68

Ramsey, III, Barton L.
Allison
Ofc. KY. Lions Eye Res. Ctr.
Louisville, 40202
502-588-5466
Res. 1500 Corlimor Lone
Louisville, 40222
502-426-9884
OPH 1612 80

JEFFERSON

Rand, Bernard O.
Dee
Ofc. 4130 Dutchmon's Ln.
Louisville, 40207
502-897-7627
Res. 620 Hotherleigh Ln.
Louisville, 40222
502-426-4033
NS 1602 59

Rankin, Carl B.
Ann
Ofc. 601 So. Floyd St.
Louisville, 40202
502-587-6681
Res. 412 Mockingbird Hill Rd.
Louisville, 40207
502-895-5515
IM 4106 59

Rankin, Thomas P.
Cheryl
Ofc. 17411 Creek Run Rd.
Louisville, 40223
502-897-7107
Res. 12902 Willowcreek Rd.
Prospect, 40059
502-228-4391
C 1602 75

Ransdell, Jr., Herbert T.
Nellie
Ofc. 624 S. Floyd St.
Louisville, 40202
502-582-1150
Res. 409 Blonkenboker Ln.
Louisville, 40207
502-895-4647
TS 1602 41

Raskin, Larry M.
Corol
Ofc. 4010 Dupont Circle
Suite 308
Louisville, 40207
502-459-8890
Res. 3906 Follen Timber Dr.
Louisville, 40222
502-425-4720
P

Ravani, Pran D.
Konto
Ofc. 10333 Linn Sto. Rd.
Louisville, 40223
502-426-0112
Res. 507 Bedfordshire Rd.
Louisville, 40222
502-426-8658
P 7025 66

Ray, J. Michael
Jo Ann
Ofc. 200 Medicol Towers N.
Louisville, 40202
502-589-1802
Res. 7805 Sunnyfield Ct.
Louisville, 40220
502-491-1819
IM 1620 74

Reddy, Mitta A. K.
Prothyusho
Ofc. P.O. Box 35070
Louisville, 40232
502-589-8110
Res. 603 Bedfordshire Rd.
Louisville, 40222
502-426-9317
ANES 7028 70

Redinger, Richard N.
Arlene
Ofc. UL, Ambulotory
Core Bldg.
Louisville, 40202
502-588-7963
Res. 11601 Toylorsville Rd.
Fisherville, 40023
502-267-8545
IM 5906 62

Redmon, James E.
Jone
Ofc. 319 Centrol Ave.
Louisville, 40208
502-637-5700
Res. 1415 S. 4th St.
Louisville, 40208
502-637-5776
FP 1602 75

Rees, Allan H.
Vivion
Ofc. 602 Childrens
Foundotion Bldg.
Louisville, 40202
502-585-4308
Res. 6707 Folls Creek Rd.
Louisville, 40222
502-426-2817
C 6001 68

Reichard, K. Thomas
Mory-Stuort
Ofc. 4001 Dutchmons Ln.
Suite 7-A
Louisville, 40207
502-897-6579
Res. 600 Sunset Rd.
Louisville, 40206
502-895-5271
ORS 1602 69

Reid, Ben A.
Ofc. 4500 Churchmon Ave.
Louisville, 40215
502-361-1143
Res. 701 Blonkenboker Ln.
Louisville, 40207
502-895-9441
SU 1602 33

Reid, Jr., Ben A.
Normo
Ofc. 4001 Dutchmons Ln. 2-F
Louisville, 40207
502-897-1536
Res. 98 Worrior Rd.
Louisville, 40207
502-896-1422
SU 1612 66

Reinecke Jr., Frank M.
Ofc. 6414 Regol Rd.
Louisville, 40222
ANES 1602 63

Reiss, Frederick C.
Jon
Ofc. 1166 Medicol
Arts Bldg.
Louisville, 40217
502-452-1566
Res. 1055 Alto Visto
Louisville, 40205
502-897-9688
SU 1602 52

Reutlinger, Barton
Morchont
Ofc. Suburbon Med. Plozo
#7A
Louisville, 40207
502-897-6579
Res. 226 Trovois Rd.
Louisville, 40207
502-896-8417
ORS 1602 75

Reynolds, Johnny G.
Agnes
Ofc. 4010 Dupont Circle
Suite 225
Louisville, 40207
502-585-2727
Res. 5210 Spring Form Rd.
Louisville, 40222
502-228-8567
ANES 1602 52

Rice, Russell R.
Suzonne
Ofc. Boptist Eost
Office Bldg.
Louisville, 40207
502-897-0287
Res. 328 Penruth Ave.
Louisville, 40207
502-897-5882
OBG 801 64

Rice, John F.
Suzonne
Ofc. 6327 Limewood
Louisville, 40222
502-636-7474
Res. 11607 Osoge Rd.
Anchoroge, 40223
502-244-9110
R 1602 72

Rice, James F.
Ofc. 6327 Limewood Circle
Louisville, 40223
EM 1602 64

Richardson, Todd G.
Eloise
Ofc. 5601 So. Third St.
Louisville, 40214
502-361-8801
Res. 931 Burning
Springs Circle
Louisville, 40223
502-245-9621
FP 1602 65

Richardson, Ronald L.
Connie
Ofc. 601 So. Floyd St.
Suite 700
Louisville, 40202
502-585-1557
Res. 3301 Broeck Pointe Ct.
Louisville, 40222
502-425-2128
GE 1612 72

Richardson, J. David
Ofc. 2404 Tovener Dr.
Louisville, 40222
SU 1612 70

Richman, Anne C. D.
Cloude Snider
Ofc. 5502 Hempsteod Rd.
Louisville, 40207
502-933-2110
Res. 5502 Hempsteod Rd.
Louisville, 40207
502-897-1350
PATH 801 49

Richman, Stephen P.
Kothleen
Ofc. UL HSC-Oncology
Louisville, 40292
502-588-5245
Res. 1375 South Fourth St.
Louisville, 40208
502-634-0116
IM

Richmond, Roland W.
Jonice
Ofc. 1169 Eostern Pkwy.
Louisville, 40217
502-459-3760
Res. 1740 Sulgrove Rd.
Louisville, 40205
502-451-1240
A 3120 55

Riehl, Richard E.
Jone
Ofc. 201 E. Morket St.
Jeffersonville, IN, 47130
812-283-5353
Res. 55 Wildwood Rd.
Jeffersonville, IN, 47130
812-283-5411
IM 1701 62

Riehm, John G.
Rose S.
Ofc. 4001 Dutchmons Ln.
Suite 1-H
Louisville, 40207
502-897-7137
Res. 4528 Lincoln Rood
Louisville, 40220
502-451-5174
A 1602 77

Rieser, James S.
Glenno
Ofc. 4010 DuPont Circle
Louisville, 40207
502-895-9451
Res. 3104 Donbury Ct.
Louisville, 40222
502-426-4282
FP 1602 59

JEFFERSON

Rigor, Sr., Ben M.
Vialeta T.
Ofc. UL, HSC, ANES
Louisville, 40292
502-588-5851
Res. 6801 Shadwell Place
Praspect, 40059
502-228-2798
ANES 8504 62

Riley, Jr., James M.
Betty
Ofc. 601 Sa. Flayd St. 805
Louisville, 40202
502-451-0300
Res. 211 Daleview Ln.
Louisville, 40207
502-893-7869
ORS 1602 44

Ringel, David R.
Mary
Ofc. 1319 Central Ave.
Louisville, 40208
502-634-3685
Res. 206 Pine Ridge Drive
Brandenburg, 40108
502-587-0389
GP 1602 66

Robbins, John J.
Judy
Ofc. Suburban Medical Plaza
Louisville, 40207
502-897-5147
Res. 6222 Innes Trace
Louisville, 40222
502-425-5011
U 1602 50

Roberts, Sheila
David Bartley
Ofc. 2120 Newburg Rd. 400
Louisville, 40205
Res. 2120 Newburg Rd. 400
Louisville, 40205
P

Roberts, Donna M.
Ofc. 2450 Glenmary Ave. #5
Louisville, 40204
502-588-5203
Res. 2450 Glenmary Ave. #5
Louisville,
502-458-1247
FP 4701 81

Robertson, George W.
Claudia
Ofc. 305 Baptist East
Dactars Bldg.
Louisville, 40207
502-897-6492
Res. 3312 Mt. Rainier Dr.
Louisville, 40222
502-425-2193
OBG 1602 76

Robie, Carroll H.
Barbara
Ofc. 3440 Medical Arts Bldg.
Louisville, 40217
502-459-3900
Res. 2556 Seneca Dr.
Louisville, 40205
502-452-2938
IM 3440 49

Robinson, Gehrig M.
Ellyn
Ofc. 760 Medical Towers Sa.
Louisville, 40202
502-585-4170
Res. 2104 Raund Ridge Rd.
Louisville, 40207
502-893-3124
CRS 1211 63

Rockov, Vladimir B.
Katica
Ofc. 4010 Dupant Circle
Suite 225
Louisville, 40207
502-585-2727
Res. 5113 Shadaw Waad Ln.
Praspect, 40059
502-228-3805
ANES 5088 64

Rodgers, Jr., George C.
Ofc. UL Dept. Pediatrics
Louisville, 40292
502-562-8837
Res. 1025 Everett Avenue #24
Louisville, 40204
502-458-6969
PD 3115 75

Rogers, John H.
Judith
Ofc. Bax 498
Pewee Valley, 40056
502-585-5415
Res. Bax 498
Pewee Valley, 40056
IM 3441 62

Roles, Earl W.
Nancy
Ofc. 411 Fincastle Bldg.
Louisville, 40202
502-583-8826
Res. 7401 Waadhill Valley Rd.
Louisville, 40222
502-228-1181
ORS 3709 32

Rollings, R. Parnell
Nancy
Ofc. 2525 Seneca Valley Rd.
Louisville, 40205
502-423-2276
Res. 2515 Seneca Valley Rd.
Louisville, 40205
502-452-1742
ADM 1602 42

Rollo, F. David
Deane
Ofc. 1800 First Natl. Towers
Louisville, 40201
502-561-2134
Res. 3717 Hillsdale Rd.
Louisville, 40222
502-425-8627
R 3115 72

Romero, A. Eddie
Nelly
Ofc. 2724 Lexingtan Rd.
Louisville, 40206
502-589-6353
Res. 2724 Lexingtan Rd.
Louisville, 40206
502-896-7169
SU 5088 58

Rose, John F.
Tina
Ofc. 4028 Elmwaad Ave.
Louisville, 40207
502-367-3414
Res. 4028 Elmwaad Ave.
Louisville, 40207
502-893-7228
OM 1602 72

Roseman, Ephraim
Wilma
Ofc. 6302 Transylvania Beach
Praspect, 40059
502-583-0696
Res. 6302 Transylvania Beach
Praspect, 40059
502-228-1636
N 1901 37

Rosenbaum, Irvin S.
Fanny Rase
Ofc. 3709 Stratford Ln.
Louisville, 40207
Res. 3709 Stratford Ln.
Louisville, 40207
502-895-1283
FP 1602 43

Rosenberg, Kenneth R.
Sherry
Ofc. 801 Barret Ave. 319
Louisville, 40204
502-583-3565
Res. 10802 Sun Ridge Rd.
Gashen, 40026
502-228-4405
ANES 1602 65

Rosenbloom, Philip
Ellen
Ofc. 620 Auduban Med. Plaza
Louisville, 40217
502-636-0574
Res. 6301 Crest Creek Ct.
Louisville, 40222
502-228-4366
SU 4105 70

Rosenstein, A. S.
Ruth
Ofc. 1734 W. Market
Louisville, 40203
502-582-2344
Louisville, 40205
502-458-9082
FP 1242 50

Roser, Charles L.
Katherine
Ofc. 1212 Summit Ave.
Louisville, 40204
Res. 1212 Summit Ave.
Louisville, 40204
502-459-7058
ENT 1602 31

Roski, Richard A.
Debra L.
Ofc. 316 Med. Dental Res.
Bldg. UL
Louisville, 40292
502-588-5433
Res. 10004 Tupperence Trace
Louisville, 40223
502-245-1699
NS 3406 76

Roth, Richard L.
Ofc. Medical Arts Bldg. 2252
Louisville, 40217
502-451-3511
Res. 1518 Schuff Lane
Louisville, 40207
502-452-2066
N 1602 52

Roth, John B.
Bannie
Ofc. 3333 Bardstawn Rd.
Louisville, 40218
502-452-6337
Res. 2009 Narthfield Dr.
Louisville, 40222
502-426-3647
PD 3440 70

Rothschild, Peter A.
Ofc. 2218 Wynnewaad Circle
Louisville, 40222
Res. 2218 Wynnewaad Circle
Louisville, 40222
502-425-3771
R 1602 81

Rowe, Lewis L.
Ofc. St. Anthany's
Hasp. Anes.
Louisville, 40204
Res. 6105 Glenhill Rd.
Louisville, 40222
ANES 1602 76

Rowntree, Gradie R.
Marjarie
Ofc. 70 Valley Rd.
Louisville, 40204
502-451-3844
Res. 70 Valley Rd.
Louisville, 40204
502-451-3844
OM 301 32

Rowntree, Marjorie
Gradie
Ofc. 70 Valley Rd.
Louisville, 40204
Res. 70 Valley Rd.
Louisville, 40204
502-451-3844
PH 2204 33

Rubin, William S.
Jackie
Ofc. 1616 Sylvan Way
Louisville, 40205
502-459-0646
Res. 1616 Sylvan Way
Louisville, 40205
502-459-1388
EM 1211 73

Rudwell, George H.
Beth
Ofc. 403 Medical Arts Bldg.
Jeffersanville, IN, 47130
812-283-0728
Res. 200 Langstan Drive
Jeffersanville, IN, 47130
812-282-4833
OTO 1320 64

JEFFERSON

Rul-lan, Carlos D.
Gladys
Ofc. 1930 Maple St.
#1498
Louisville, 40201
Res. 10400 Croswell Trace
Lauisville, 40223
502-245-3446
OM 2434 47

Rumage, William T.
Eleonor
Ofc. 501 Fincostle Bldg.
Lauisville, 40202
502-585-5889
Res. 3726 Conoe Lone
Louisville, 40207
502-895-0895
SU 3119 46

Rush, E. N.
Dorothy
Ofc. 3101 Breckinridge Ln.
Louisville, 40220
502-456-1390
Res. 9608 Foirmont Road
Lauisville, 40291
502-239-5807
GP 1602 47

Ryan, James E.
Dorothy
Ofc. 133 N. Pompano
Beach Blvd.
Pompano, FL, 33062
Res. 133 N. Pompano
Beach Blvd.
Pampana, FL, 33062
896-0883
CRS 1602 36

Ryan, John E.
Theala
Ofc. 4500 Churchman Ave.
Louisville, 40215
502-366-0515
Res. 5344 Lost Troil
Lauisville, 40214
502-366-0515
FP 1602 50

Ryan, Jr., John J.
Ruth
Ofc. #3 Audubon Dr. 320
Lauisville, 40217
502-637-8721
Res. 1289 Cherokee Rd.
Louisville, 40204
502-454-3302
OPH 1602 58

Saam, Henry G.
Mildred
Ofc. 3814 St. Germaine Ct.
Louisville, 40207
Res. 3814 St. Germaine Court
Louisville, 40207
502-893-5943
SU 1602 31

Sabharwal, Kailash C.
Urmil
Ofc. 3 Audubon Plaza Dr.
#430
Louisville, 40217
502-636-5532
Res. 6708 Tollwood Court
Praspect, 40059
502-228-4060
IM 7001 61

Sabharwal, Urmil
Koilosh
Ofc. 6708 Tollwood Ct.
Prospect, 40059
502-456-2783
Res. 6708 Tallwood Court
Praspect, 40059
502-228-4060
D 7001 62

Sadtler, Joseph E.
Nancy
Ofc. 4602 Southern Pkwy.
Louisville, 40214
502-368-2543
Res. 524 Borberry Lane
Louisville, 40206
502-895-5279
FP 1602 63

Sakler, Allen M.
Ruth
Ofc. 605 Southview Dr.
Lauisville, 40207
Res. 605 Southview Drive
Louisville, 40207
502-893-3255
OPH 5088 37

Salazar, Mauricio
Ofc. 2-D Suburbon
Medicol Plaza
Lauisville, 40207
502-895-5429
Res. 302 Rannoch Court
Louisville, 40243
502-245-5283
CRS 8201 58

Saliba, Alex
Maureen
Ofc. 2407 Tavener Dr.
Lauisville, 40222
502-583-1344
Res. 2407 Tavener Drive
Louisville, 40222
502-425-5244
PUD 7801 52

Salot, Roger D.
Joan
Ofc. Medicol Arts Bldg.
Louisville, 40217
502-451-7725
Res. 1812 Tyler Lone
Lauisville, 40205
502-459-5792
OPH 1602 60

Salsitz, Richard B.
Tanyo
Ofc. 100 E. Liberty
Lauisville, 40202
502-584-0166
Res. 49 Ten Broeck Woy
Louisville, 40222
502-426-1101
ANES 3108 55

Samols, Ellis
Gabrielle
Ofc. 1213 Park Hills
Louisville, 40207
502-895-3401
Res. 1213 Park Hills Drive
Louisville, 40207
502-897-9187
IM 5088 56

Sams, Sr., Bernard F.
Ruth
Ofc. 5900 Cabin Way
Louisville, 40222
502-897-7411
Res. 5900 Cabin Way
Louisville, 40222
502-425-9555
R 1602 61

Sanders, George B.
Elizabeth
Ofc. 20 Stone Bridge Rd.
Lauisville, 40207
Res. 20 Stane Bridge Rd.
Louisville, 40207
502-895-0743
SU 3120 35

Sandman, Jr., William J.
Anne
Ofc. 5A Suburbon Med. Plaza
Louisville, 40207
502-897-0688
Res. 3011 Rexford Woy
Louisville, 40205
502-458-1009
SU 1602 54

Sanfilippo, Joseph S.
Patricia
Ofc. 601 So. Floyd St.
Louisville, 40202
502-583-3845
Res. 5505 Apache Road
Lauisville, 40207
502-896-0118
OBG 1222 73

Sanneman, Everett H.
Betty
Ofc. 2B Suburban
Medical Plozo
Lauisville, 40207
502-897-2514
Res. 3720 Edmond Lane
Lauisville, 40207
502-895-4150
IM 2402 45

Sarasohn, Charles
Stephonie
Ofc. 6206 Preston Hwy.
Lauisville, 40219
502-964-2458
Res. 43 Hill Road
Lauisville, 40204
502-459-9525
PD 2403 71

Sasser, Gerald L.
Doloris
Ofc. 5500 Hidden Rd.
Fern Creek, 40291
502-459-4900
Res. 5500 Hidden Drivve
Lauisville, 40291
502-499-1197
FP 1602 57

Sawhill, Fred A.
Gwen
Ofc. 4010 Dupont Circle
Suite. 225
Louisville, 40207
502-893-2510
Res. 3303 Mt. Roinier Drive
Lauisville, 40222
502-423-9298
ANES 2434 43

Sawhney, Kewal K.
Deviko
Ofc. 323 E. Chestnut
Louisville, 40202
502-589-4321
Res. 608 Bedfordshire Road
Louisville, 40222
502-425-0057
ANES 5088 63

Scalzitti, Carmine J.
Pat
Ofc. 3945 Nanz Ave.
Lauisville, 40207
502-897-6454
Res. 514 Altagate Rd.
Louisville, 40206
502-897-9192
PD 1602 56

Schafer, George W.
Pot
Ofc. 732 Greenridge Ln.
Louisville, 40207
502-897-1839
Res. 732 Greenridge Lone
Lauisville, 40207
502-895-8630
ANES 1602 52

Scheen, Jr., S. Randolph
Betty
Ofc. Baptist Eost
Doctors Bldg.
Louisville, 40207
502-896-8803
Res. 6211 Innes Troce Rd.
Louisville, 40222
502-426-1003
D 1602 53

Scheen, III, Samuel R.
Ofc. 205 Baptist East
Dr. Bldg.
Louisville, 40207
502-896-8863
Res. Box 184
Harrods Creek, 40027
502-228-4734
D 1602 77

Schiavone, Robert P.
Colleen
Ofc. 3606 Suite A
Klondike Ln.
Lauisville, 40218
502-451-4322
Res. 2908 Lightheort Rd.
Lauisville, 40222
502-425-2409
FP 1602 61

JEFFERSON

Schikler, Kenneth M.
Jessico
Ofc. 44 Eostover Ct.
Louisville, 40206
502-589-8750
Res. 44 Eostover Ct.
Louisville, 40206
502-896-8300
PD 1602 72

Schiller, Sheldon B.
Denise
Ofc. 4001 Dutchmons Ln. LLD
Louisville, 40207
502-897-9856
Res. 5807 Round Hill Rd.
Louisville, 40222
502-425-4345
OPH 5909 60

Schiller, Martin
Potricio
Ofc. 220 Audubon
Medicol Plozo
Louisville, 40217
502-636-9226
Res. 423 Dorsey Woy
Louisville, 40223
502-425-9775
ORS 5909 64

Schlossberg, Barry J.
Morilyn
Ofc. Medicol Plozo SW
Suite 305
Louisville, 40272
502-933-0050
Res. 6201 Innes Troce
Louisville, 40222
502-423-1282
IM 1901 68

Schmied, William K.
Tori K.
Ofc. 4122 Shelbyville Rd.
Louisville, 40207
502-897-7575
Res. 6313 Deep Creek Drive
Prospect, 40059
502-228-5992
U 1602 74

Schneider, Paul David
Kotherine
Ofc. 3 Audubon Plozo Dr.
340
Louisville, 40217
502-637-7681
Res. 1219 Summit Ave.
Louisville, 40204
502-459-2453
IM 1907 74

Schneider, Glenn D.
Andreo
Ofc. 9822 Old 3rd St. Rd.
Suite 205
Louisville, 40272
502-933-2644
Res. 815 Colonel
Anderson Porkwoy
Louisville,
502-425-2397
OTO 3702 70

Schoen, Arthur M.
Betty
Ofc. 370 Medicol Towers So.
Louisville, 40202
502-589-4694
Res. 594 Sunset Rd.
Louisville, 40206
502-896-0666
GE 1602 43

Schoo, Bernard J.
Cotherine
Ofc. 1152 Medicol Arts Bldg.
Louisville, 40217
502-458-5374
Res. 616 Cressbrook Dr.
Louisville, 40206
502-896-4447
SU 1602 46

Schramm, Theodore A.
Shirley
Ofc. 2120 Newburg Rd.
Louisville, 40205
502-456-1890
Res. Brookside Dr.
Louisville, 40205
502-456-1890
P 1602 53

Schreiber, Donald Merle
Ofc. 209 First St.
LoGronge, 40031
502-222-7111
Res. 2251 Rutherford Wynd
Louisville, 40205
IM 1602 74

Schrodt, George Randolph
Betty
Ofc. UL, HSC, Poth.
Louisville, 40292
502-588-5341
Res. 2412 Volletto Rd.
Louisville, 40205
502-451-8859
PATH 1602 54

Schroeder, Thomas J.
Priscillo
Ofc. Suburbon Hosp.
Louisville, 40207
502-896-2890
Res. 317 Alcott Rd.
Louisville, 40207
EM 4806 75

Schuhmann, George N.
Helen
Ofc. 1827 Tyler Ln.
Louisville, 40205
Res. 1827 Tyler Ln.
Louisville, 40205
502-451-1635
IM 1602 37

Schuhmann, Alan G.
Joonne
Ofc. 801 Borret Ave.
Louisville, 40204
502-585-5908
Res. 1706 Colder Ct.
Louisville, 40205
502-456-6723
U 1602 71

Schwab, John J.
Ruby
Ofc. Dept. of Psy.
U of L, HSC
Louisville, 40292
502-588-5387
Res. 6217 Innes Troce
Louisville, 40222
502-426-6015
P 1602 46

Schwab, J. Matthew
Morie
Ofc. 217 E. Chestnut St.
Louisville, 40202
502-587-4231
Res. 4 Arden Rd.
Glenview, 40025
502-426-0744
R 1602 67

Schweitzer, Robert L.
Norma
Ofc. 3950 Kresge Woy
Louisville, 40207
502-897-6492
Res. 2810 Roinbow Drive
Louisville, 40206
502-895-9628
OBG 4105 68

Scofield, Edward L.
Tiffony
Ofc. Suite 510
Audubon Med. Plozo
Louisville, 40217
502-636-3521
Res. 15 Westwind Rood
Louisville, 40207
502-896-8715
TS 1602 64

Scott, Edwin P.
Eunice
Ofc. 400 Cornell Ploce
Louisville, 40207
502-895-5401
Res. 2950 Roinbow Dr.
Louisville, 40206
502-896-4679
PD 1602 40

Scullin, Jr., Daniel C.
Robin
Ofc. 850 Borret Ave. #301
Louisville, 40204
502-583-5318
Res. 3072 Beols Bronch Rd.
Louisville, 40206
502-895-8871
H 3440 70

Seay, Menefee
Diono
Ofc. 8013 LoGronge Rd. #4
Louisville, 40222
502-425-7878
Res. 7602 Springvole Rd.
Louisville, 40222
502-425-1417
IM 1602 58

Seebold, Robert J.
Pot
Ofc. 5215 Bordstown Rd.
Louisville, 40291
Res. 5215 Bordstown Rd.
Fern Creek, 40291
502-499-1323
FP 1602 39

Sehlinger, George A.
Ofc. 1169 Eostern Pkwy.
#2313
Louisville, 40217
502-452-1552
Res. 609 Cressbrook Dr.
Louisville, 40206
502-895-2113
U 1602 40

Sehra, Kankanady H.
Kumor Bhonu
Ofc. Suite 469
Dupont Circle 4010
Louisville, 40207
502-895-0411
Res. 201 Willow Stone Woy
Louisville, 40223
502-245-6357
FP 7034 52

Seifer, Fred P.
Corol
Ofc. 3 Audubon Plozo Dr.
#350
Louisville, 40217
502-583-0696
Res. 1713 Cloyton Rd.
Louisville, 40205
502-459-9053
N 1602 69

Seitz, Kent
Cloire
Ofc. L-12 Audubon
Medicol Plozo
Louisville, 40217
502-637-8701
Res. 2353 Ingleside Drive
Louisville, 40205
502-451-0618
PD 1602 74

Seligman, Jerry W.
Lillion
Ofc. 506 Medicol Towers
Louisville, 40202
502-584-5122
Res. 7214 Shefford Ln.
Louisville, 40222
PD 1602 64

Senese, Robert M.
Corol
Ofc. 4430 Crowford Ave.
Louisville, 40258
502-935-5633
Res. 3012 Shollcross Woy
Louisville, 40222
502-426-2539
PD 1320 63

Seng, Janet
Ofc. 11518 Moin St.
Middletown, 40243
502-245-4168
Res. 10609 Sycomore Court
Louisville, 40223
502-893-7497
FP 1602 78

JEFFERSON

Senler, Vicdan A.
Osman
Ofc. 2120 Newburg Rd.
#306
Louisville, 40205
502-452-9941
Res. 2007 Lakeland Rd.
Louisville, 40223
502-245-8574
P 9301 55

Serratoni, Frank T.
Karen Lynn
Ofc. 217 E. Chestnut St.
Lauisville, 40202
502-587-4330
Res. 3328 Halls Hill Road
Crestwood, 40014
502-241-0042
PATH 2101 66

Sessoms, Nora U.
Ofc. 810 Barret Ave.
Louisville, 40204
ANES 5088 67

Severs, Charles B.
Carol Lee
Ofc. 1208 Patamac Place
Louisville, 40214
502-937-1717
Res. 1208 Potomac Place
Lauisville, 40214
502-368-0139
FP 1602 58

Seward, Gary L.
Ofc. UL IM Box 35260
Lauisville, 40292
IM 1602 78

Sexter, Mark S.
Sharon
Ofc. 602 Doctors
Office Bldg.
Lauisville, 40202
502-584-0651
Res. 2906 Corlinsford Drive
Louisville, 40222
502-425-0558
U 1602 57

Sexton, Jr., Robert F.
Noncy
Ofc. 4500 Churchman Ave.
Lauisville, 40215
502-367-2411
Res. 908 Bellewood Rd.
Anchorage, 40223
502-245-4367
NS 5904 59

Shacklette, C. B.
Esther
Ofc. 4125 Dixie Hwy.
Lauisville, 40216
Res. 4125 Dixie Hwy.
Louisville, 40216
502-447-0773
GP 1602 30

Shadowen, Michael W.
Ofc. 751 N. Hite #4
Lauisville, 40206
502-589-4321
Res. 751 N. Hite, #4
Lauisville, 40206
502-895-6640
R 1602 80

Shafer, Cecil W.
Frances
Ofc. Chimney Rack Villoge
Harradsburg, 40330
Res. Route 1
Harrodsburg, 40330
606-748-5227
ANES 1602 34

Shafii, Mohammad
Sharan Lee
Ofc. 200 Eost Chestnut St.
Louisville, 40202
502-588-6941
Res. 6305 Shadaw Waod Ct.
Praspect, 40059
502-228-3388
P 5088 61

Shanahan, Patrick T.
Ofc. 100 E. Liberty St.
Lauisville, 40202
502-584-0167
ANES 3440 75

Shane, Charles B.
Melanie
Ofc. 407 Childrens
Foundotion Bldg.
Lauisville, 40202
502-587-0767
Res. 10305 Falling Tree Way
Lauisville, 40223
502-245-1139
OBG 1602 73

Shanklin, J. Day
Sandy
Ofc. 9822 Old 3rd St. Rd.
100 Med.
Lauisville, 40272
502-935-1124
Res. 1117 Cardinal Dr.
Lauisville, 40213
502-637-7948
FP 1602 63

Shapiro, David
Ofc. 3465 Poinciono Dr.
Apt. AMB 206
Lake Worth, FL, 33463
Res. 3465 Painciana Dr.
Apt. AMB 206
Lake Warth, FL, 33463
305-433-0905
R 37

Shaw, Houston W.
Margaret
Ofc. 7204 Marino Dr.
Halmes Beach, FL, 33510
Res. 7204 Morina Dr.
Holmes Beach, FL, 33510
813-778-9460
SU 3441 33

Shaw, Jerry M.
Martha Jane
Ofc. #858 Med. Towers So.
Lauisville, 40202
502-583-5553
Res. Bax 201-B, Route 2-X
Prospect, 40059
502-228-8434
IM 1701 54

Shaw, Charles R.
Helen
Ofc. 4509 S. Ocean Blvd.
Highlond Beach, FL 33431
Res. 4505 Sauth Ocean Blvd.
Highland Beoch, FL 33431
305-272-7891
GP 1602 34

Shaw, III, Robert W.
Paula H.
Ofc. 601 Sa. Floyd, Suite 303
Lauisville, 40202
502-587-6681
Res. 415 Pennyroyal Way
Louisville, 40223
IM 1602 78

Shea, Raymond G.
Rita
Ofc. 364 Medicol Towers So.
Louisville, 40202
502-584-5547
Res. 7121 Covered Bridge Rd.
Prospect, 40059
502-228-3145
ORS 3109 66

Shearer, Loretta T.
David
Ofc. 3401 Mount Rainier Dr.
Lauisville, 40222
502-589-8220
Res. 3401 Mt. Ronier Drive
Lauisville, 40222
502-426-3281
R 1602 64

Shee, George T.
Wonda
Ofc. 3101 Breckinridge Ln.
Suite 1E
Lauisville, 40220
502-451-8540
Res. 4207 Naneen Dr.
Lauisville, 40216
502-361-8038
IM 1602 73

Shein, Melvin
Lillian
Ofc. 3950 Kresge Way #407
Lauisville, 40207
502-895-2472
Res. 6406 Regal Rd.
Lauisville, 40222
502-425-6054
IM 1602 43

Shepherd, Frederick P.
Ruth
Ofc. 12902 Osage Rd.
Louisville, 40223
502-969-9393
Res. 12902 Osage Rd.
Lauisville, 40223
502-245-4688
FP 1901 50

Sheth, Rajesh K.
Bakula
Ofc. 530 S. Jockson St.
Lauisville, 40202
502-588-5203
Res. 530 S. Jacksan St.
Lauisville, 40202
502-897-6560
FP

Shields, Christopher B.
Debarah
Ofc. 332 Medical Towers So.
Louisville, 40202
502-583-1697
Res. 2400 Groy Fox Rd.
Louisville, 40205
502-456-5869
NS 5088 66

Shipp, David C.
Rase
Ofc. 2781 Mople Rd.
Lauisville, 40205
502-896-2271
Res. 2781 Mople Rd.
Lauisville, 40205
502-895-3362
CRS 1602 56

Shoemaker, Donald R.
Cothy
Ofc. 11704 E. Arbar Dr.
Lauisville, 40223
502-893-2510
Res. 11704 East Arbor Drive
Louisville, 40223
502-245-6080
ANES 1602 72

Short, Dwight B.
Lois
Ofc. 217 Chestnut St.
Louisville, 40202
502-587-4231
Res. 13903 Fairwoy Ln.
Prospect, 40059
502-228-3151
R 1602 68

Shott, Roger J.
Diane
Ofc. Box 23403
Ancharoge, 40223
502-562-8626
Res. Bax 23403
Anchorage, 40223
502-245-2970
PD 4501 64

Shpilberg, George Y.
Sara
Ofc. 10505 Dixie Hwy.
Valley Station, 40272
502-937-3154
Res. 2713 Lamont Rd.
Louisville, 40205
502-452-2225
FP 8402 56

Shrader, Edward C.
Glaria
Ofc. 4001 Dutchmans Ln.
Louisville, 40207
502-897-9801
Res. 3035 Pappy Woy
Louisville, 40206
502-893-2160
OPH 1602 54

Shulthise, Arthur J.
Wyllye
Ofc. 1901 Outer Laap
Louisville, 40219
502-969-6958
Res. 2601 Kings Highway
Lauisville, 40205
502-452-9609
FP 1602 54

JEFFERSON

Siaotong, Winnie B.
Ofc. P.O. Box 14126
Louisville, 40214
502-361-5322
ANES 8504 71

Silk, Kenneth L.
Ofc. 250 E. Liberty
Louisville, 40202
502-583-9425
Res. 2403 Henley Ct.
Louisville, 40222
502-426-7250
OTO 2101 67

Silverman, Irving
Ingun
Ofc. Norton-Childrens
Hosp. 35070
Louisville, 40232
502-562-7710
Res. 1858 Overlook Terroce
Louisville, 40205
502-459-6342
OTO 4805 63

Simmons, Stanley T.
Effie
Ofc. 430 Volencio Ave.
Corol Gobles, FL 33134
Res. 430 Volencio Ave., Apt. 16
Corol Gobles, FL 33134
305-448-5047
IM 1602 24

Simon, Ansel V.
Helen
Ofc. 209 N. Modison Ave.
Middletown, 40243
Res. 209 N. Modison Ave.
Middletown, 40243
502-245-5704
FP 1602 40

Simon, Frank G.
Helen
Ofc. 5 B. Suburbon
Medicol Plozo
Louisville, 40207
502-895-5088
Res. 5838 Brittony Woods Cr.
Louisville, 40222
502-426-1599
A 2007 66

Simrall, James H.
Sondro
Ofc. 334 Medicol Towers So.
Louisville, 40202
502-587-6991
Res. 5406 Novojo Rd.
Louisville, 40207
502-896-6703
TS 4501 65

Sivak, George C.
Gino
Ofc. 250 E. Liberty #809
Louisville, 40202
502-589-4723
Res. 719 Broeview Rd.
Louisville, 40206
502-895-2177
U 3441 43

Skolnick, Judah L.
Arlene
Ofc. 224 E. Broodwoy 700
Louisville, 40202
502-587-0915
Res. 3023 Wicklond Rd.
Louisville, 40205
PUD 1602 65

Sligar, William M.
Ofc. 1220 Spring St.
Jeffersonville, IN, 47130
502-893-3777
Res. 5403 Novojo Rood
Louisville, 40207
502-897-5865
ORS 2007 72

Sloane, Harvey I.
Ofc. Moyor, 601 W. Jefferson St.
Louisville, 40202
502-587-3061
Res. 1401 So. 4th St.
Louisville, 40208
502-637-3016
ADM 3406 63

Slucher, Richard R.
Emmo
Ofc. 7908 Wolf Pen
Bronch Rd.
Prospect, 40059
Res. 7908 Wolf Pen
Bronch Rd.
Prospect, 40059
502-228-1858
IM 1602 30

Smego, Douglas R.
Mory Ann
Ofc. 601 So. Floyd St.
Suite 700
Louisville, 40202
502-583-8303
Res. 601 S. Floyd St.
Suite 700
Louisville, 40202
502-245-6437
SU 2905 77

Smith, Tom J.
Mortho
Ofc. Rt. Stingy Ridge FM
Sulphur, 40070
Res. Box 6, Rt. 1
Sulphur, 40070
IM 3441 38

Smith, Stanley E.
Evelyn
Ofc. 108 Combridge
Stotion Rd.
Louisville, 40223
Res. 108 Combridge
Stotion Rd.
Louisville, 40223
502-245-1310
FP 3103 42

Smith, Francis J.
Moxine
Ofc. 6516 Sumoc Ln.
Crestwood, 40014
502-241-0923
Res. 6516 Sumoc Ln.
Crestwood, 40014
502-241-0923
SU 3145 44

Smith, John R.
Eloine
Ofc. 12107 Locust Ln.
Anchoroge, 40223
502-459-6286
Res. Locust Ln.
Anchoroge, 40223
502-245-8702
R 1602 50

Smith, Mary A.
Tom
Ofc. 226 E. Chestnut St.
Louisville, 40202
502-589-8000
Res. 1306 Abbeywood Rd.
Louisville, 40222
502-425-6756
PD 1602 58

Smith, Barry S.
Jonie
Ofc. 220 Abrohom Flexner Woy
Louisville, 40202
502-584-3376
Res. 702 Lexington Pl.
Louisville, 40206
502-897-0933
PRM 3702 69

Smith, Stephen Z.
Sheryl
Ofc. 3950 Kresge Woy
Louisville, 40207
502-896-8803
Res. 9218 Morlboro Circle
Louisville, 40222
502-426-5006
D 1907 71

Smith, Charles S.
Cothy
Ofc. 608 Flot Rock Rd.
Rt. 12
Anchoroge, 40223
502-895-3424
Res. 608 Flot Rock Rd.
Rt. 12
Anchoroge, 40223
502-245-4362
A 1602 73

Smith, Harriette A.
Ofc. UL, Dept. of OBG
Louisville, 40292
Res. U.L., Dept. of OBG
Louisville, 40292
OBG

Smith, Janet L.
Ofc. 825 Borrett
Louisville, 40204
C 1602 76

Smith, Jr., Orson P.
Frances
Ofc. P.O. Box 843
Louisville, 40201
502-585-2241
Res. 109 Chodwick Rd.
Louisville, 40223
502-425-0894
R 3101 47

Smith, Jr., Charles C.
Rosemory
Ofc. #858 Medicol Towers So.
Louisville, 40202
502-583-5553
Res. 2109 Stormont Rood
Louisville, 40207
502-895-0729
IM 1602 55

Sohi, Gurbachan S.
Indu
Ofc. ACB-Cordiology
550 S. Jockson
Louisville, 40202
502-588-7959
Res. 550 S. Jockson Street
Louisville, 40207
502-896-6619
C 7014 62

Solinger, Robert E.
Somi
Ofc. Childrens Hosp.
Louisville, 40202
502-585-4802
Res. 1144 Rostrevor Circle
Louisville,
502-895-7568
PD 1602 67

Sonne, Louis S.
Ofc. 3 Audubon Medicol Plozo
210
Louisville, 40217
502-636-2841
Res. 1011 Alto Circle
Louisville, 40205
U 1602 46

Southard, John B.
Borboro
Ofc. 4327 Pork Blvd.
Louisville, 40209
502-366-7741
Res. 1007 Whetstone Woy
Louisville, 40223
502-245-3783
FP 1602 54

Spalding, William W.
Adelyn
Ofc. 915 Boxter Ave.
Louisville, 40204
502-456-4100
Res. 702 Brior Hill Rood
Louisville, 40206
502-893-2722
FP 1602 54

Sparrow, Athel Bert
Borboro
Ofc. 310 Medicol Towers No.
Louisville, 40202
502-584-3525
Res. 808 Rugby Pl.
Louisville, 40222
502-425-4096
SU 1602 64

Spear, Richard C.
Ofc. Medicol Towers Bldg.
#808
Louisville, 40202
502-584-7357
SU 3440 43

JEFFERSON

Speer, David L.
Trish
Ofc. 3957 Park Dr.
Louisville, 40216
502-448-7853
Res. 328 S. Brenwaad Ave.
Louisville, 40206
502-448-7853
PD 1602 74

Speevack, Bernard L.
Ofc. 4430 Crawfard Ave.
Louisville, 40258
502-935-5633
Res. 322 Crescent
Spring Drive
Louisville, 40206
502-893-9163
PD 1602 75

Spencer, Bobbie E.
Evelyn
Ofc. Medical Arts Bldg.
Louisville, 40217
502-451-1448
Res. 8010 Wanda Way
Louisville, 40219
502-969-0744
ANES 1602 62

Spratt, Jr., John S.
Beverly
Ofc. 529 Sa. Jacksan St.
Louisville, 40202
502-588-5593
Res. 2206 Bell Tavern Ct.
Louisville, 40207
502-896-1207
SU 4212 52

Sridharan, Marandapalli R.
Vidya
Ofc. 323 E. Chestnut St.
Louisville, 40202
502-589-4668
Res. 5404 Navaja Raad
Louisville, 40207
502-895-9003
C 7027 72

St. Clair, Harvey R.
Pally
Ofc. 850 Barret Ave.
Suite 203
Louisville, 40204
502-582-3827
Res. 2600 Taphill Raad
Louisville, 40206
502-893-5946
P 4504 45

Stambaugh, Harry D.
Bette
Ofc. 4001 Dutchmans Ln. #3
Louisville, 40207
502-895-5466
Res. 3900 Simcae Lane
Louisville, 40207
502-425-1322
PS 1602 54

Stansbury, Robert A.
Ofc. 4122 Shelbyville Rd.
Suite D
Louisville, 40207
502-583-0269
Res. 1243 Everett Ave.
Louisville, 40204
502-459-9077
R 1602 54

Stauffer, Robert A.
Mardi
Ofc. 917 Lane Tree Ct.
Louisville, 40223
502-635-7404
Res. 917 Lane Tree Caurt
Louisville, 40223
502-245-1874
OBG 3714 74

Steffen, Theodore N.
Pamela
Ofc. Auduban Medical Plaza
#450
Louisville, 40217
502-636-3491
Res. 2404 Park Baundary Rd.
Louisville, 40205
502-459-3934
OTO 4501 54

Stege, George C.
Martha
Ofc. 1717 Herbert Ave.
Shively, 40216
502-448-4223
Res. 1521 Thackeray Dr.
Louisville, 40205
502-451-1598
FP 1602 50

Stege, III, George C.
Diane
Ofc. 801 Barret Ave. 220
Louisville, 40204
502-583-3189
Res. 2048 Eastview Avenue
Louisville, 40205
502-456-4457
FP 1602 79

Steiner, R. W. Prasaad
Ofc. 1294 Willaw Ave.
Louisville, 40204
Res. 1294 Willaw Avenue
Louisville, 40204
FP 1602 73

Stephenson, Thomas V.
Chris
Ofc. 5135 Dixie Hwy. 21
Louisville, 40216
502-448-0214
Res. 3208 Five Oaks Pl.
Louisville, 40207
502-897-5776
PUD 1602 64

Stephenson, Harry C.
Catherine
Ofc. 300 Dactars
Office Bldg.
Louisville, 40202
502-587-6729
Res. 526 Primrase Way
Louisville, 40206
502-897-6805
OPH 4105 63

Stephenson, Stuart F.
Jayce Ann
Ofc. 1038 Washingtan St.
Shelbyville, 40065
502-245-2234
Res. 2707 Cave Spring
Louisville, 40223
OPH 1602 77

Sternberg, Louis B.
Pauline
Ofc. 7 Pin Oak Ln.
Louisville, 40207
Res. 7 Pin Oak Ln.
Louisville, 40207
502-895-5052
PD 3441 34

Stetten, Maynard L.
Nancy
Ofc. 601 Sauth Flayd St.
Louisville, 40202
502-585-4376
Res. 2003 Camarga Rd.
Louisville, 40207
502-895-4445
ORS 2101 63

Stevens, Virginia A.
Ofc. 2131 Waadfard Place
Louisville, 40205
502-587-1831
Res. 2131 Waadfard Place
Louisville, 40205
502-452-1102
OBG 1602 56

Stewart, David L.
Martha
Ofc. 2120 Newburg Rd.
Louisville, 40205
502-456-1891
Res. 2108 Edgehill Rd.
Louisville, 40205
502-459-1696
P 1602 46

Stewart, Martha J.
David
Ofc. 2108 Edgehill Rd.
Louisville, 40205
502-451-3617
Res. 2108 Edgehill Rd.
Louisville, 40205
502-459-1696
OBG 1602 41

Stewart, Robert H.
Margaret
Ofc. 2120 Newburg Rd.
#207
Louisville, 40205
502-451-2753
Res. 2110 Lauderdale Raad
Louisville, 40205
502-459-2737
P 1602 76

Stigall, Thomas G.
Mariam
Ofc. 435 Medical Arts Bldg.
Louisville, 40217
502-459-7454
Louisville, 40222
502-426-5140
IM 1602 46

Stites, Frank M.
Caralyn
Ofc. 4071 Gilman Ave.
Louisville, 40207
Res. 2132 Waadfard Pl.
Louisville, 40205
502-893-0087
IM 1602 16

Stites, Temple B.
Virginia
Ofc. 232 Medical Tawers Sa.
Louisville, 40202
502-583-3477
Res. 396 Mackingbird
Valley Rd.
Louisville, 40207
502-897-2223
IM 3101 57

Stivers, James R.
Ofc. Suite 1129
Med. Arts Bldg.
Louisville, 40217
502-456-5580
Res. 13705 Rutland Raad
Praspect, 40059
502-228-4477
U 1612 71

Stober, John G.
Juanita
Ofc. 10407 Taylarsville Rd.
Louisville, 40299
502-267-5456
Res. 4404 Taylarsville Rd.
Louisville, 40220
502-491-7905
FP 1602 67

Stockwell, John R.
Helen R. J.
Ofc. Cammandant
USCG Hdg. G-KOM-4
Washingtan, DC, 20593
202-472-5325
Res. 7203 Ethan Allen Way
Valley Statian, 40272
502-937-7949
PH

Stodghill, William B.
Sue
Ofc. 850 Barret Ave.
#302
Louisville, 40204
502-585-5046
Res. 2612 Taphill Rd.
Louisville, 40206
502-895-8746
IM 1602 54

Stokes, Jr., Lowell L.
Susan
Ofc. 3950 Kresge Way
Suite 405
Louisville, 40207
502-897-0667
Res. 440 Cauntry Ln.
Louisville, 40207
502-897-7802
OPH 3101 68

Stoler, Barry S.
Bannie
Ofc. 6329 Limewaad Circle
Louisville, 40222
502-587-0915
Res. 6329 Limewaad Circle
Louisville, 40222
502-587-0915
PUD 1602 66

Stone, Howard
Shoron
Ofc. 8013 LoGrange Rd.
Louisville, 40222
502-426-2548
Res. Louisville, 40205
502-451-6966
PD 1242 66

Stoutt, Jr., Glenn R.
Tyleen
Ofc. 3101 Breckinridge Ln.
Louisville, 40220
502-451-7922
Res. 1107 Old Horrods
Creek Rd.
Anchoroge, 40223
502-451-2132
PD 4106 54

Sturgeon, Gerald F.
Potricio Ann
Ofc. 1001 DuPont Sq.
Louisville, 40207
502-897-1727
Res. 500 Croydon Court
Louisville, 40222
502-897-0310
PD 1612 65

Summay, Dillard R.
Jone
Ofc. 612 Medicol Towers No.
Louisville, 40202
502-584-8988
Res. 8916 Lippincott Rd.
Louisville, 40222
502-426-1934
ANES 1602 59

Sumner, Robert L.
Stello E.
Ofc. P.O. Box 447
Horrisburg, IL 62946
618-253-7671
Res. P.O. Box 447
Horrisburg, IL 62946
618-252-3319
R 1602 51

Sutherland, J. Patrick
Mory Helen
Ofc. 608 Medicol Towers
Louisville, 40202
502-584-0289
Res. 7246 Heotherly Squore
Louisville, 40222
502-425-5724
OBG 1602 58

Sweet, Richard A.
Jonet
Ofc. 4130 Dutchmon's Ln.
Louisville, 40207
502-897-1794
Res. 1604 Cherokee Rood
Louisville, 40205
502-452-6509
ORS 1612 76

Sweitzer, Stephan J.
Helen
Ofc. 602 Doctors
Office Bldg.
Louisville, 40202
502-584-0651
Res. 7205 Shefford Lone
Louisville, 40222
502-425-1852
U 4105 70

Tak, Abdul Rehman
Robio
Ofc. 2238 Medicol Arts Bldg.
Louisville, 40217
502-451-4125
Res. 10601 Chertsey Ploce
Louisville, 40243
502-245-7445
IM 8304 64

Talbott, C. Maximilian
Ofc. 4122 Shelbyville Rd.
Louisville, 40207
502-895-3365
Res. 115 Heody Avenue
Louisville, 40207
502-895-8128
OTO 1602 46

Tamburro, Carlo H.
Kothleen Mory
Ofc. Dept. of Medicine
U of L
Louisville, 40292
502-588-5252
Res. 512 Brondon Rd.
Louisville, 40207
502-895-2955
GE 2905 62

Tate, Robert C.
Leo
Ofc. Floyd & Groy St.
Louisville, 40202
502-587-0745
Res. 3311 Brownsboro Rd.
Louisville, 40207
502-896-4200
SU 1602 42

Taustine, Lloyd R.
Kothy
Ofc. 2343 Medicol Arts Bldg.
Louisville, 40205
812-265-6535
Res. 2319 Seneco
Volley Rood
Louisville, 40205
502-454-3090
OPH

Temes, Gerald D.
Mouro
Ofc. 234 Eost Groy St.
Louisville, 40202
502-587-6991
Res. 1823 Tyler Lone
Louisville, 40205
502-451-7130
TS 3115 63

Templeton, III, William C.
Bunny
Ofc. 850 Borret Ave.
Suite 102
Louisville, 40204
502-583-3320
Res. 11900 Running
Creek Rd.
Louisville, 40243
502-245-9719
IM 1602 77

Theiss, Jr., Chester B.
Scottie
Ofc. 2120 Newburg Rd.
Suite 310
Louisville, 40205
502-459-8890
Res. 3420 Nondino Dr.
Louisville, 40222
502-425-1651
P 1602 49

Thind, Gurdarshan S.
Nikki
Ofc. 530 So. Jockson St.
Louisville, 40202
502-588-5745
Res. 17603 Pope Dole Rood
Louisville, 40223
502-589-4668
IM 7028 62

Thind, Rajinder K.
Gurdor
Ofc. Pope Dole Rd.
Louisville, 40223
502-244-1966
Res. 17603 Pope Dole Rd.
Louisville, 40223
502-244-1966
PD 5088 66

Thomas, Donald M.
Edno
Ofc. Univ. Hosp.
530 So. Jockson
Louisville, 40202
502-588-6993
Res. 3220 Rock Creek Dr.
Louisville, 40207
502-893-3708
EM 3701 55

Thomas, Joan E.
Lee
Ofc. 2306 W. Morket St.
Louisville, 40212
502-778-4416
Res. 2904 Juniper Hill Rd.
Louisville, 40206
502-895-7110
FP 1602 66

Thomas, John W.
Kothleen
Ofc. Med. Towers So.
Suite 100-B
Louisville, 40202
502-583-0269
Res. 2427 Aintree Woy
Louisville, 40220
502-459-0779
R 1612 69

Thomas, B. Preston
Ofc. 4001 Dutchmons Ln.
Louisville, 40207
502-893-1045
Res. 521 Zorn Avenue
Louisville, 40206
502-893-0647
PATH 3701 70

Thomas, J. Kent
Morsho
Ofc. Suburbon Medicol
Plozo LLD
Louisville, 40207
502-896-2418
Res. 872 Milford Ct.
Louisville, 40207
502-893-5835
OPH 1602 62

Thomas, Alexander T.
Ofc. 315 E. Broodwoy ER
Louisville, 40202
EM 5088 60

Thompson, Malcom D.
Fronces
Ofc. 2602 Newburg Rd.
Louisville, 40205
502-458-3687
Res. 2602 Newburg Rd.
Louisville, 40205
502-458-3687
SU 3701 22

Thompson, Joseph L.
Ann
Ofc. Prof. Tower 511
Louisville, 40207
502-895-5471
Res. 7216 Shefford Ln.
Louisville, 40222
502-425-5588
D 1602 67

Thompson, Leroy E.
Ethel
Ofc. 2225 W. Broodwoy
Louisville, 40211
502-775-6465
Res. 7417 Tom Joe Dr.
Louisville, 40222
502-423-0548
OBG 4107 64

Thompson, Jr., Walter L.
Pot
Ofc. 3940 Kresge Woy
Louisville, 40207
502-895-3441
Res. 4051 Ormond Rd.
Louisville, 40207
502-896-4767
IM 1602 61

Thurman, David H.
Rebecco
Ofc. P.O. Box 4434
Louisville, 40204
502-587-1161
Res. P.O. Box 4434
Louisville, 40204
502-451-6311
PRM 1602 66

Thurman, Peter L.
Suson
Ofc. 858 Medicol Towers So.
Louisville, 40202
502-583-5553
Res. 2505 Seneco
Volley Rood
Louisville, 40205
502-459-7783
IM 1602 75

JEFFERSON

Tillett, Robert S.
Jeon
Ofc. Floyd & Groy Sts.
Louisville, 40202
502-583-8843
Res. 2330 Broodmeode Rd.
Louisville, 40205
502-452-6449
IM 3406 46

Tillett, Jr., Robert S.
Priscillo
Ofc. 2564 Dell Rd.
Louisville, 40205
502-589-6172
Res. 2564 Dell Rood
Louisville, 40205
502-456-6882
N 1602 75

Tittel, Jr., Paul W.
Ofc. 3025 North Buckeye Ln.
Goshen, 40026
R 1602 73

Tobias, Carmelita R.
Reggie
Ofc. 5301 Pueblo Rd.
Louisville, 40207
502-895-3401
Res. 5301 Pueblo Rd.
Louisville, 40207
502-896-0334
P 5088 69

Tobias, Regulo J.
Cormel
Ofc. 5301 Pueblo Rd.
Louisville, 40207
502-896-0334
Res. 5301 Pueblo Rd.
Louisville, 40207
502-896-0334
IM 8502 64

Tobin, Daniel A.
Morguerite
Ofc. Brown Concer Ctr.
Louisville, 40202
502-588-5254
Res. 3108 Springcrest Dr.
Louisville, 40222
502-425-1218
R 1211 44

Tobin, II, Gordon R.
Elisobeth
Ofc. 2413 Tovener Dr.
Louisville, 40222
502-583-8303
Res. 2413 Tovener Dr.
Louisville, 40222
502-426-8109
PS 402 69

Tomlin, Jerrold E.
Nino
Ofc. 1220 Spring St.
Jeffersonville, IN, 47130
812-282-8494
Res. 5714 Lentizer Troce
Jeffersonville, IN, 47130
ORS

Tomlinson, John C.
Virginio
Ofc. 825 Borret Ave.
Louisville, 40204
502-584-2338
Res. 2354 Ingleside Drive
Louisville, 40205
502-459-7893
C 1701 52

Tonkin, Ina D.
Allen
Ofc. LeBonheur Child. Med. Ctr.
Memphis, TN, 38103
901-522-3195
Res. 718 Eventide
Memphis, TN, 38119
901-767-7718
R 1602 70

Torres, Jose C.
Moriono
Ofc. 1120 Spring St.
Jeffersonville, IN, 47130
812-282-1519
Res. 2301 Augusto Drive
Jeffersonville, IN, 47130
812-282-1519
TS 54

Townsend, Hastel L.
Beuloh
Ofc. 1607 Evergreen Rd.
Louisville, 40223
Res. 1607 Evergreen Rd.
Louisville, 40223
502-245-5276
R 4604 37

Trimbur, Thomas R.
Ruth Ann
Ofc. 207 Boptist E. Drs. Bldg.
Louisville, 40207
502-897-7107
Res. 2011 High Conyon Rd.
Louisville, 40207
502-897-5757
C 1602 70

Tsai, Tsu-min
Fu-Mei
Ofc. 1001 Drs. Office Bldg.
Louisville, 40202
502-581-9563
Res. 4006 Woodstone Woy
Louisville, 40222
502-228-1050
SU 6105 62

Turner, Robert E.
Terry L.
Ofc. 530 S. Jockson St.
Louisville, 40202
502-588-7742
Res. 1121 Abbeywood Rd.
Louisville, 40222
502-423-9585
FP 1602 81

Turns, Danielle M.
Ofc. Dept. Psych. UL
Louisville, 40292
502-895-3401
Res. 3611 Coscode Rd.
Louisville, 40222
502-423-1294
P 5088 63

Twyman, Wilbert M.
Normo
Ofc. 1110 Heyburn Bldg.
Louisville, 40202
502-584-2353
Res. 4402 Signol Hill Rd.
Louisville, 40207
502-896-4580
SU 1602 39

Tyler, Lucy S.
Ofc. 4122 Shelbyville Rd.
Louisville, 40207
502-895-8015
Res. 2100 Cormorgo Rd.
Louisville, 40207
IM 1602 74

Tyson, J. Wendell
Rose
Ofc. 217 E. Chestnut St.
Louisville, 40202
502-587-4207
Res. 1307 Buckeye Ln.
Goshen, 40026
502-228-3519
R 301 68

Ulfe, Mario V.
Mortho
Ofc. 601 So. Floyd St. 501
Louisville, 40202
502-582-2537
Res. 9101 Seoton
Springs Pkwy.
Louisville, 40222
502-426-8865
OBG 8402 58

Ulfe, Martha B.
Morio
Ofc. 9101 Seoton
Springs Pkwy.
Louisville, 40222
Res. 9101 Seoton
Springs Pkwy.
Louisville, 40222
502-426-8865
GP 8401 58

Upton, Roy D.
Helen
Ofc. 8903 Thelmo Ln.
Louisville, 40220
502-636-3417
Res. 8903 Thelmo Lone
Louisville, 40220
502-491-2901
IM 1602 76

Urbach, Stuart
Sherrie
Ofc. 3451 Medicol
Arts Bldg.
Louisville, 40217
502-452-2633
Res. 1817 Tyler Ln.
Louisville, 40205
502-458-6034
IM 1602 47

Urton, John W.
Kitty
Ofc. 2833 Tremont Dr.
Louisville, 40205
Res. 2833 Tremont Dr.
Louisville, 40205
P 1602 60

Valentine, Mary McDaniel
Ofc. Children's Hosp.
Pediotrics
Louisville, 40202
Res. Children's Hosp.
Pediotrics
Louisville, 40202
PD 1602 79

Van Nostrand, Leslie
Glorio
Ofc. 2120 Newburg Rd.
Louisville, 40205
502-456-1980
Res. 5203 Tomohowk Rd.
Louisville, 40207
502-895-4126
P 3108 47

Van Vooren, Albert
Ro
Ofc. 4001 Dutchmons Ln.
Louisville, 40207
502-897-1776
Res. Route #1
Finchville, 40022
502-585-1260
IM 5905 57

Vandertoll, Donald J.
Jeonette
Ofc. 601 S. Floyd St.
Louisville, 40202
502-583-8303
Res. Route 5, Box 233
Shelbyville, 40065
502-587-1423
SU 1602 59

Vannier, Frank P.
Beverly
Ofc. 2903 Aspen Dole Rd.
Louisville, 40222
502-426-7360
Res. 2903 Aspen Dole Drive
Louisville, 40222
GP 1602 78

Varga, Donald T.
Shirley
Ofc. 858 Medicol Towers So.
Louisville, 40202
502-585-2361
Res. 3001 Bunker Hill Dr.
Louisville, 40205
502-451-9164
IM 1602 57

Veal, III, Molloy G.
Sondro
Ofc. Suite 230
Audubon Med. Plozo
Louisville, 40217
502-636-3417
Res. 701 Thorpe Drive
Louisville, 40243
502-245-3164
IM 1602 76

Velasco, Hugo
Ofc. 4001 Dutchmans Ln.
LLE
Louisville, 40207
502-897-6166
Res. 9103 Seoton
Spring Pkwy.
Louisville, 40222
502-425-2315
FP 5088 60

JEFFERSON

Venhoff, George D.
Ellen
Ofc. 10327 Linn Statian Rd. #1 Louisville, 40223 502-426-2261
Res. 802 Huddelsfield Ct. Louisville, 40222 502-897-6695
IM 1602 73

Verdi, Gerald D.
Charlene
Ofc. 250 East Liberty St. 504 Louisville, 40202 502-584-2201
Res. 11601 Valley View Rd. Louisville, 40223 502-245-8555
PS 3103 65

Vermillion, Margaret B.
Ofc. 105 Harrisan Ave. Middletawn, 40243 502-245-0228
Res. P.O. Bax 23333 Ancharage, 40223
PD 1701 52

Vogt, Rudolph F.
Catherine
Ofc. 4000 Kresge Way Louisville, 40207
Res. Mackingbird Valley Rd. Louisville, 40207 502-895-3555
OBG 1602 34

Volk, Donna M.
Thamas
Ofc. 200 E. Chestnut Louisville, 40202 502-589-8750
Res. 212 Gibsan Rd. Louisville, 40207 502-895-2568
PD 1602 73

Von Roenn, Kenneth F.
Marjarie
Ofc. 3721 Taylarsville Rd. Louisville, 40220 502-459-3248
Res. 2267 Speed Avenue Louisville, 40205 502-451-1193
P 1602 65

VonderHaar, William P.
Elayne
Ofc. 1170 E. Braadway #400 Louisville, 40204 502-589-0260
Res. 1908 Tyler Lane Louisville, 40205 502-459-6123
FP 1602 56

Voyles, Harry E.
Stephanie
Ofc. 1201 E. Spring St. New Albany, IN, 47150 812-944-7754
Res. Bax 162 Flayd Knabs, IN, 47119 812-945-3020
IM 1320 58

Waflart, Theodore
Ofc. Medical Arts Plaza Huntingburg, IN, 47542 812-683-4900
Res. 521 4th Street Huntingburg, IN, 47542 812-683-2077
FP

Wagemaker, Herbert
Mary Ann
Ofc. Amb. Care Bldg. 550 S. Jacksan Louisville, 40292 502-588-5870
Res. 6612 Falls Creek Rd. Louisville, 40222 502-425-9966
P 3709 61

Wagner, Charles E.
Peggy
Ofc. U af L Schaal af Med. Louisville, 40292 502-588-5171
Res. 506 Fairlawn Rd. Louisville, 40207 502-895-7879
ADM

Wagner, Alfred T.
Juanita
Ofc. 11700 Osage Rd. Ancharage, 40223 502-585-2727
Res. 11700 Osage Rd. Ancharage, 40223 502-245-4257
ANES 1602 45

Wahl, Robert R.
Beverly
Ofc. 5610 Walf Pen Trace Praspect, 40059 502-583-3565
Res. 5610 Walf Pen Trace Praspect, 40059 502-228-8733
ANES 1602 66

Wald, Herbert
Jane
Ofc. 204 Marksfield Circle, #1 Louisville, 40222
Res. 204 Marksfield Circle, #1 Louisville, 40222 502-426-7069
SU 1201 37

Walker, James D.
Patricia
Ofc. 330 E. Oak St. Louisville, 40203 502-636-2833
Res. 13700 Rutland Raad Praspect, 40059 502-228-3675
FP 1602 63

Walker, Jon D.
Lynn
Ofc. 801 Barret Ave. #116 Louisville, 40204 502-583-6241
Res. 5912 Brittany Valley Rd. Louisville, 40222
SU 1612 73

Walker, Candace L.
Ofc. 6302 E. Manslick Rd. Louisville, 40219 502-589-8607
Res. 6302 E. Manslick Rd. Louisville, 40219 502-968-0138
P 1902 78

Wallace, Jr., Thomas S.
JaAnn
Ofc. 400 E. Gray Louisville, 40202 502-587-3376
Res. 9207 Tivertan Way Louisville, 40222 502-425-1313
PH 1602 51

Walsh, Thomas P.
Elinar
Ofc. 1974A Dauglas Blvd. Louisville, 40205 502-454-0300
Res. 3201 Dublin Lane Louisville, 40206 502-893-5450
ENT 1602 36

Ward, Jr., Will W.
Cathleen
Ofc. 506 Fincastle Bldg. Louisville, 40202 502-587-8471
Res. 5801 Orian Raad Louisville, 40222 502-425-6125
IM 1602 54

Ware, Donald L.
Betty
Ofc. 4130 Dutchman's Ln. Louisville, 40207 502-897-0697
Res. 1715 Spring Drive Louisville, 40205 502-454-5725
OBG 1602 54

Warrick, Jr., Edward
Sherry
Ofc. 3950 Kresge Way 100 Baptist East Louisville, 40207 502-897-0269
Res. 5812 Orian Raad Louisville, 40222 502-423-0190
SU 1602 48

Wasser, Lawrence J.
Rhanda
Ofc. 506 Medical Tawers Louisville, 40202 502-584-5122
Res. 7211 Fax Harbar Raad Praspect, 40059 502-228-0674
PD 1907 74

Waterman, Norton G.
Judy
Ofc. 268 Medical Tawers Sa. Louisville, 40202 502-587-0609
Res. 15 Paplar Hill Raad Louisville, 40207 502-895-0264
SU 2001 55

Wathen, Ronald L.
Cecelia
Ofc. 2E 323 E. Chestnut St. Louisville, 40202 502-588-5757
Res. 507 Brandan Raad Louisville, 40207 502-895-7438
IM 4212 68

Watkins, David R.
Sharan
Ofc. 220 Abraham Flexner Way Louisville, 40202 502-584-3376
Res. 3033 Beals Branch Raad Louisville, 40206
PRM 1602 76

Watson, Thomas R.
Sylvia
Ofc. I-D Suburban Med. Plaza Louisville, 40207 502-893-3651
Res. 2 River Hill Raad Louisville, 40207 502-896-1919
OBG 1602 61

Watson, J. Roy
Angela
Ofc. 233 E. Grey St. Suite 814 Louisville, 40202 502-589-1240
Res. 3518 Breeland Louisville, 40222 502-423-8937
OBG 1602 69

Watts, John
Nancy
Ofc. 3811 Altawaad Ct. Ancharage, 40223 502-587-1161
Res. 3811 Altawaad Caurt Ancharage, 40223 502-241-8846
R 1602 51

Wayne, III, Peter H.
Judith
Ofc. 1108 DuPant Circle Louisville, 40207 502-897-0139
Res. 3512 Rems Raad Louisville, 40222 502-426-8999
R 2107 72

Weakley, Samuel D.
Lalita
Ofc. 103 Bapt. E. Dactars Bldg. Louisville, 40207 502-897-5139
Res. 1416 Cherakee Raad Louisville, 40204 502-451-1313
SU 1602 50

Weakley, Lolita S.
Sam
Ofc. 1416 Cherakee Rd. Louisville, 40204
Res. 1416 Cherakee Raad Louisville, 40204 502-451-1313
ANES 1602 53

JEFFERSON

Weakley-Jones, Barbara
W. Scott
Ofc. 4713 Kittyhowk Woy
Louisville, 40207
502-589-4321
Res. 4713 Kittyhowk Woy
Louisville, 40207
502-893-5448
PATH 1602 77

Webb, George E.
Potricio
Ofc. 323 E. Chestnut St.
Louisville, 40202
502-562-8112
Res. 1452 Cherokee Rood
Louisville, 40204
502-459-0429
ANES 1211 62

Weber, William L.
Julio
Ofc. L-12 Audubon Med. Plozo
Louisville, 40217
502-637-8701
Res. 9103 Morse Henry Drive
Louisville, 40299
502-267-0494
PD 1602 75

Weeter, John M.
Lindo
Ofc. 3E Suburbon Medicol Plozo
Louisville, 40207
502-895-5466
Res. 30 Southwind Rood
Louisville, 40207
502-893-5921
PS 1612 72

Weiner, Leonard J.
Ofc. 601 So. Floyd St. 700
Louisville, 40202
502-583-8303
Res. 3500 Woodside Rood
Louisville, 40222
502-895-5508
PS 3146 61

Weinstein, Gary S.
Morsho A.
Ofc. 220 Breckinridge Ln.
Louisville, 40207
502-893-9191
Res. 7414 Greenlown Rd.
Louisville, 40222
502-426-7835
P 0102 76

Weiss, Robert M.
Sorino
Ofc. RR 2 Box 445-C
New Albony, IN 47150
812-948-1148
Res. Route 2, Box 445-C
New Albony, IN 47150
812-923-3474
D 1602 67

Weiss, Jeffrey A.
Koren
Ofc. 250 Med. Towers So.
Louisville, 40202
502-562-7600
Res. 2405 Morymount Court
Louisville, 40222
502-425-9635
R 1320 72

Weiss, Jr., Morris M.
Ofc. 301 Doctors Office Bldg.
Louisville, 40202
502-585-4321
Res. 1446 Cherokee Rood
Louisville, 40204
C 1602 58

Weiskopf, Bernard
Penny
Ofc. 334 E. Broodwoy Ch. Ev. Ct.
Louisville, 40202
502-588-5340
Res. 6409 Deep Creek Drive
Prospect, 40059
502-228-8654
PD 8002 58

Wellman, Paul K.
Koy
Ofc. 4122 Shelbyville Rd.
Louisville, 40207
502-895-3230
Res. 8809 Dennington Drive
Louisville, 40222
502-426-4762
OPH 3712 47

Wellman, Robert G.
Borboro
Ofc. 1298 Cedorcliff Rd.
Xenio, OH 45385
Res. Wright Potterson AFB, Ohio
Xenio, OH 45385
513-429-4743
P 1602 74

Welsh, Donald V.
Potricio
Ofc. 4001 Dutchmons Ln.
Suite LL-C
Louisville, 40207
502-893-0159
Res. 606 Moryhill Lone
Louisville, 40207
502-896-6190
OTO 1320 76

West, Edwin H.
Mildred
Ofc. 116 Holley Rd.
Louisville, 40222
Res. 116 Holley Rood
Louisville, 40222
502-426-2555
PH 1701 37

West, Gregory A.
Ofc. 627 S. Preston 7G
Louisville, 40202
502-562-6000
Res. 627 South Preston St.
Louisville, 40202
502-589-3528
PD

Wetzelberger, Craig C.
Beverly
Ofc. 539 Foirfield
Louisville, 40206
502-361-6306
Res. 539 Foirfield Drive
Louisville, 40206
502-895-8160
R 1602 60

Wheatley, Jr., John W.
Deborah C.
Ofc. 3901 Dixie Hwy.
Shively, 40216
502-448-7114
Res. 3029 Eleonor
Louisville,
FP 1602 78

Wheeler, Stanley D.
Jeon
Ofc. P.O. Box 38
Crestwood, 40014
502-241-8488
Res. 3903 Evergreen Rood
Crestwood, 40014
502-241-8164
GP 412 47

Wheeler, Chalmer S.
Ofc. 217 E. Chestnut
Louisville, 40202
502-587-4231
Res. 924 Breckinridge Lone
Louisville, 40207
502-895-9817
R 1602 64

Wheeler, Gary E.
Ofc. UL—Rheumotology
Louisville, 40292
502-588-5233
Res. 514 Grond Visto Pl
Louisville, 40243
502-245-7159
IM 4504 71

Whelan, Jr., Joseph G.
Jeon
Ofc. 419 Blonkenboker Ln.
Louisville, 40207
502-587-1161
Res. 419 Blonkenboker Lone
Louisville, 40207
502-896-0063
R 1602 63

White, III, William
Corol
Ofc. 4001 Dutchmons Ln.
Louisville, 40207
502-895-2313
Res. 6200 Fox Volley Drive
Prospect, 40059
502-228-3955
PATH 4105 73

White, Jr., George H.
Sue
Ofc. 801 Borret
Louisville, 40204
502-583-3565
Res. 716 Circle Hill Rood
Louisville, 40206
502-897-6229
ANES 1602 54

White, Jr., A. Franklin
Morgoret Ann
Ofc. 233 E. Groy St.
Louisville, 40202
502-583-1427
Res. 5106 Dunvegon Rood
Louisville, 40222
502-426-2697
A 3205 56

Whitehead, Ralph E.
Kotherine
Ofc. 3007 Wicklond
Louisville, 40205
502-969-3296
Res. 3007 Wicklond Rood
Louisville, 40205
502-459-1280
FP 1602 59

Whitt, John J.
Debbie
Ofc. 4001 Dutchmons Ln.
3E
Louisville, 40207
502-895-5466
Res. 2210 Bell Tovern Court
Louisville, 40207
502-893-5913
PS 1612 73

Widmer, Nelson D.
Virginio
Ofc. 2116 Buechel Bonk Rd.
Louisville, 40218
Res. 2111 Buechel Bonk Rd.
Louisville, 40218
502-499-1716
GP 1907 24

Wijangco, Isabelita P.
Williom
Ofc. 250 E. Liberty
Louisville, 40202
502-587-0521
Res. 339 Mockingbird Volley
Louisville, 40207
502-587-0522
IM 8502 66

Wilhoit, Jack C.
Suson
Ofc. 7905 Wolfe Pen
Bronch Rd.
Prospect, 40059
502-584-0167
Res. 7905 Wolfe Pen
Bronch Rd.
Prospect, 40059
502-228-8366
ANES 1602 57

Wilkerson, Shirley Ann
Ofc. UL-Pediotrics
Louisville, 40292
502-562-8626
Res. 10117 Wiegleib Avenue
Louisville, 40223
502-245-9464
PD 0102 77

Wilson, Walter L.
Elizobeth Ann
Ofc. 8117 Violet Ave.
Lyndon, 40222
502-425-7567
Res. 9015 Old Whipps
Mill Rood
Louisville, 40222
502-425-7509
FP 1602 57

JEFFERSON

Wilson, Larry J.
Potsy J.
Ofc. 440 Churchman Ave.
Rodiology
Louisville, 40215
502-361-6306
Res. 1003 Glenbrook Rood
Louisville, 40223
R 1602 69

Winchell, Sidney W.
Frances Roe
Ofc. 100 East Liberty
Louisville, 40202
502-584-0167
Res. 3005 Lightheart Road
Louisville, 40222
502-426-4660
ANES 3709 56

Wine, Leo J.
Kothleen
Ofc. 1011 Alta Visto Rd.
Louisville, 40205
502-893-0446
Res. 1011 Alta Vista Rood
Louisville, 40205
502-896-8655
SU 1602 64

Winslow, Jr., David H.
Rito
Ofc. 5135 Dixie Hwy.
Louisville, 40216
502-447-7214
Res. 6019 Innes Troce
Louisville, 40222
502-425-3066
PUD 1602 73

Winstead, Welby I
Ofc. 601 So. Floyd St.
Louisville, 40202
502-583-8303
Res. 740 Zorn Ave.
Louisville, 40206
502-897-1525
SU 1907 76

Witten, Raleigh E.
Ofc. 4227 Poplor Level Rd.
Louisville, 40213
502-458-4060
Res. 1425 Everett Avenue
Louisville, 40204
502-458-1724
FP 1602 45

Witten, Carroll L.
Shirley
Ofc. Corshir
2237 Toylorsville Rd.
Louisville, 40205
502-458-9521
Res. The Dartmouth
Louisville, 40204
502-458-9521
FP 1602 51

Witten, Jr., Carroll L.
Ofc. UL Orthopedics
Louisville, 40292
ORS 1602 77

Wittliff, James L.
Mitzie
Ofc. UL School of Med.
Dept. of BIOCHEM
Louisville, 40292
502-588-5216
Res. 1011 Glenbrook Rood
Anchorage, 40223
502-245-5508
IM

Wolf, Paul A.
Julia
Ofc. 8402 Preston Hwy.
Louisville, 40219
502-969-9393
Res. 3000 Biloxi Court
Louisville, 40205
502-459-3425
FP 1602 54

Wolf, Richard S.
Mary Bert
Ofc. 4884 Brownsboro Rd.
Louisville, 40207
502-896-4459
Res. 7423 Woodhill
Volley Road
Louisville, 40222
502-897-2058
PD 3441 56

Wolfe, John J.
Jill
Ofc. 280 Second Ave. So.
Noples, FL 33940
Res. 280 Second Ave. So.
Noples, FL 33940
262-4287
SU 601 33

Wolfe, Walter M.
Thelmo
Ofc. 250 E. Liberty
Louisville, 40202
502-585-5325
Res. 202 Woodcleft Avenue
Louisville, 40222
502-425-0302
OBG 1901 46

Wolfe, R. Dietz
Ofc. Audubon Hospitol
Louisville, 40217
IM 1602 44

Wolff, Thomas W.
Geroldine
Ofc. 250 E. Liberty St.
Louisville, 40202
502-581-9563
Res. 2007 High
Conyon Rood
Louisville, 40207
502-896-8104
ORS 1320 69

Wolford, John L.
Mory
Ofc. 1900 Bluegrass
St. Marys #300
Louisville, 40215
502-361-0105
Res. 2509 Newburg Rood
Louisville, 40205
502-452-1984
C 2434 51

Wolfson, Norman S.
Frances
Ofc. 811 Somoa Woy
Louisville, 40207
502-588-5875
Res. 811 Somoa Woy
Louisville, 40207
502-895-8484
R 1602 60

Wolfson, Stewart E.
Leono
Ofc. Norton-Childrens Hosp.
Louisville, 40202
502-562-7875
Res. 3101 Runnymede Road
Louisville, 40222
502-425-7223
PATH 1602 72

Womack, A. Lynn
Ofc. Suite 610
Audubon Med. Plozo
Louisville, 40217
502-636-7455
Res. 612 Cobblestone Squore
Louisville, 40223
502-244-1412
FP 1612 77

Wood, Donald G.
Mory
Ofc. 354 Medicol Towers So.
Louisville, 40202
502-588-5237
Res. 7902 Sunbury Lone
Louisville, 40220
502-491-2630
IM 1602 75

Woodard, Robert L.
Sue
Ofc. 4010 DuPont Ct.
#210
Louisville, 40207
502-895-3494
Res. 4409 Mt. Vernon Rood
Louisville, 40220
502-895-3494
ORS 1602 41

Woodcock, Thomas M.
Noncy
Ofc. U of L
Dept. of Oncology
Louisville, 40292
502-588-5245
Res. 1364 S. First Street
Louisville, 40208
IM 3101 70

Woods, Elizabeth B. H.
Don Anthony
Ofc. Medicol Towers No.
Suite 513
Louisville, 40202
502-589-7762
Res. 914 Lone Tree Court
Louisville, 40223
502-245-9454
OBG 1001 75

Wright, Don W.
Marion
Ofc. 118 So. Sherrin Ave.
Louisville, 40207
502-897-5149
Res. 567 Sunset Rood
Louisville, 40206
502-895-3581
IM 1602 64

Wright, Stephen P.
Dione
Ofc. 3101 Breckinridge Ln.
Louisville, 40220
502-451-7922
Res. 410 Pennyroyal Woy
Louisville, 40223
502-451-2132
PD 1602 72

Wright, Richard A.
Koren
Ofc. 550 So. Jockson Street
Louisville, 40292
502-588-6991
Res. 13110 Springhill Way
Prospect, 40059
502-228-1469
GE 3712 74

Wright, II, John C.
Jone
Ofc. 530 S. Jackson St.
Louisville, 40202
502-588-5203
Res. 12518 LoGrange Rd.
Louisville, 40223
502-241-4768
FP 3109 55

Wright, III, Jesse H.
Susonne
Ofc. Norton's Psychiotric
Clinic
Louisville, 40202
502-562-8854
Res. 2307 Thornhill Road
Louisville, 40222
502-426-9452
P 3702 69

Wygal, Janet
Robert Zoller
Ofc. Generol Hosp.
Louisville, 40202
502-583-3845
Res. 202 Ring Road
Louisville, 40207
502-897-7751
OBG 1602 76

Yacoub, Yacoub Elias
Uroib
Ofc. 100 E. Liberty
Louisville, 40202
502-584-0166
Res. 3718 Lime Kiln Lane
Louisville, 40222
502-425-5700
ANES 6502 72

Yacoub, Uraib A. H.
Yocoub
Ofc. Childrens Hosp.
Louisville, 40202
502-589-8992
Res. 3718 Lime Kiln Lone
Louisville, 40222
502-425-5700
PATH 5088 64

Yancey, William E.
Cynthio
Ofc. 4825 S. Third St.
Louisville, 40214
502-361-1121
Res. 9619 Fairmount Rood
Louisville, 40291
502-239-7247
FP 1602 52

Yates, Joseph R.
Bi
Ofc. Western Boptist Hosp.
Paducoh, 42001
Res. 330 Polisodes Circle
Pocucoh, 42001
EM 1602 80

Yepuri, C. Ram
Sokku
Ofc. 2221 Meodow Dr.
Louisville, 40218
Res. 434 Knightsbridge Rd.
Louisville, 40206
502-897-7695
IM

Yoon, Young K.
Kwong J. Yoon
Ofc. UL, Dept. of Anes.
Louisville, 40292
502-588-5851
Res. 3805 Drexel Court
Louisville, 40222
502-425-8967
ANES 7601 63

Yopp, Lloyd G.
Mortho
Ofc. 430 Audubon Med. Plazo
Louisville, 40217
502-636-5532
Res. 517 Brior Hill Rood
Louisville, 40206
502-895-7889
IM 1602 52

Young, Rolando C.
Morites L.
Ofc. 2243 Medicol Arts Bldg.
Louisville, 40217
812-451-4313
Res. 3502 Polmetto Drive
Jeffersonville, IN, 47130
812-282-1688
N

Young, Lucy C.
Ofc. P.O. Box 32800
Louisville, 40232
502-560-3713
Res. 2444 Ransdell Avenue
Louisville, 40204
502-459-6670
FP 3440 69

Young, III, C. Milton
Ofc. 250 E. Liberty St.
Louisville, 40202
502-583-9900
Res. 740 Zorn Avenue
Louisville, 40206
502-583-9900
IM 4107 61

Yusk, Janice W.
John F.
Ofc. 4001 Dutchmans Ln. 6C
Louisville, 40207
502-897-3366
Res. 7403 Woodhill
Volley Rood
Louisville, 40222
502-897-2058
D 4106 66

Yusk, John F.
Jonice
Ofc. 4884 Brownsboro Rd.
Louisville, 40207
502-896-4459
Res. 7403 Woodhill
Valley Rood
Louisville, 40222
502-897-2058
PD 4106 66

Yussman, Marvin A.
Renee
Ofc. 601 S. Floyd St.
Louisville, 40202
502-583-3845
Res. 767 Greenridge Lane
Louisville, 40207
502-897-1232
OBG 1602 60

Zegart, Kenneth N.
Shelly
Ofc. 801 Childrens
Foundotion Bldg.
Louisville, 40202
502-583-8334
Res. 12-Z River Hill Road
Louisville, 40207
502-897-1266
OBG 2101 64

Zenger, George H.
June
Ofc. One Audubon Plozo Dr.
Louisville, 40217
502-636-7251
Res. 5000 Dunvegon
Louisville, 40222
502-426-7259
R 4106 54

Ziegler, K. Vincent
Gemmo
Ofc. 3501 Poplor Level Rd.
Louisville, 40213
502-459-2161
Res. 2539 Dell Rood
Louisville, 40205
502-451-8422
FP 1602 54

Zieverink, Sara E.
Sidney Monroe
Ofc. Office Louisville
Generol Hospitol
Louisville, 40205
502-588-5872
Res. 2779 Mople Road
Louisville, 40205
502-893-7707
R 4105 68

Zimmerman, Leo W.
Ofc. Moyflower Apts.
Louisville, 40203
Res. Moyflower Apts.
Louisville, 40203
502-635-6592
OBG 1602 21

Zimmerman, Nathan
Bobette
Ofc. 9822 Third St. Rd.
Louisville, 40272
502-937-3864
Res. 2351 Ingleside Drive
Louisville, 40205
502-458-3545
FP 1602 52

Zoeller, Peggy S.
Bruce
Ofc. 621 Uplond Rd.
Louisville, 40206
Res. 621 Uplond Rood
Louisville, 40206
502-895-6496
PD 1612 71

Zoller, Robert C.
Jonet Wygol
Ofc. 3950 Kresge Woy
Suite 302
Louisville, 40207
502-897-0280
Res. 202 Ring Rood
Louisville, 40207
502-897-7751
OBG 3109 77

Zolna, Sheldon A.
Ofc. 841 Rivercrest Dr.
Louisville, 40206
Res. 2511 River Bend Dr.
Louisville, 40206
IM 5088 69

Zukof, Martin
Esther
Ofc. 7512 Old
Shepherdsville Rd.
Louisville, 40219
502-968-6226
Res. 3602 Glencreek Lone
Louisville, 40218
502-459-1573
FP 1602 58

Zukof, Walter H.
Helene
Ofc. 7512 Old
Shepherdsville Rd.
Louisville, 40219
502-968-6226
Res. 3615 Glencreek Lane
Louisville, 40218
502-451-3516
FP 1602 66

JACKSON

Curd, Philip R.
Ofc. Box 129
McKee, 40447
606-287-7105
Res. Box 129
McKee, 40447
606-965-3315
FP 1612 69

JESSAMINE

Cabaltica, Restituto M.
Corolyn S.
Ofc. 204 Edgewood Dr.
Nicholosville, 40356
606-885-6038
Res. 204 Edgewood Dr.
Nicholosville, 40356
606-887-1426
GP 5088 55

Corbitt, Phyllis J.
Duvon C.
Ofc. 317 E. Moin St.
Wilmore, 40390
606-858-3129
Res. 200 East Main St.
Wilmore, 40390
606-858-3487
FP 4105 52

Dunkelberger, Dale E.
Edith M.
Ofc. 101 W. Main St.
Wilmore, 40390
606-858-3561
Res. 200 Moxey St.
Wilmore, 40390
606-858-3325
FP 3713 47

Mendoza, Lorenzo P.
Evongelino A.
Ofc. 202 Savannoh Dr.
Nicholosville, 40356
606-887-2273
Res. 202 Sovonnah Drive
Nicholosville, 40356
606-887-2273
GP 5088 57

JOHNSON

Arriola, Pedro
Ofc. Pointsville Med. Ctr.
U.S. 23 S
Pointsville, 41240
Res. Paintsville, 41240
U 5088 65

Arriola, Ermelinda
Pedro M.
Ofc. Pointsville Med. Ctr.
U.S. 23 S
Pointsville, 41240
606-789-3010
Res. U.S. 23 South
Pointsville, 41240
606-297-4717
ANES 8504 66

Basha, Nabil
Lois A.
Ofc. P.O. Box 749
Pointsville, 41240
606-789-7040
Res. P.O. Box 749
Pointsville, 41240
606-789-7128
SU 9101 73

Belhasen, Franklen K.
Laretta P.
Ofc. Paintsville Medical Ctr.
Paintsville, 41240
606-789-8749
Res. Route 23 South
Paintsville, 41240
606-789-5841
FP 1612 64

Chua, Corazon N.
Ofc. 111 Main St.
Paintsville, 40157
606-789-5977
Res. Elite Aportment #10
Pointsville, 41240
606-789-1446
P 5088 73

Fraim, Jerry D.
Mory Elizabeth
Ofc. 176 Euclid Ave.
Pointsville, 41240
606-789-3578
Res. 176 Euclid Avenue
Paintsville, 41240
606-789-4693
FP 4106 62

Grino, Agripino D.
Monuel Grino
Ofc. 111 Main St.
Paintsville, 41240
606-789-6847
Res. 111 Main St.
Paintsville, 41240
606-789-7086
OBG 5088 66

Hall, Paul B.
Blanche
Ofc. 169 Euclid Ave.
Pointsville, 41240
606-789-3511
Res. 163 Euclid Avenue
Paintsville, 41240
606-789-3441
SU 1602 23

Hall, Lon C.
Ofc. 169 Euclid Ave.
Pointsville, 41240
606-789-3511
Res. 551 Court St.
Paintsville, 41240
606-789-8167
PD 1602 37

Hall, Robert A.
Kothleen
Ofc. Pointsville Hosp.
Paintsville, 41240
606-789-3511
Res. Davis Branch Road
Paintsville, 41240
606-789-5196
SU 1602 46

Hall, Maurice M.
Adele H.
Ofc. Euclid Ave.
Paintsville, 41240
606-789-3511
Res. Davis Branch
Paintsville, 41240
606-789-4363
FP 1705 47

Minix, Michael B.
Ofc. 522 College St.
Paintsville, 41240
606-789-3717
Paintsville, 41240
OPH 1612 68

Musgrave, Ernest E.
Linda
Ofc. 191 Euclid Ave.
Paintsville, 41240
606-789-3503
Res. 191 Euclid Ave.
Paintsville, 41240
606-789-4803
OM 5088 54

Park, Donald S.
Ofc. 111 Main St.
Pointsville, 41240
Res. 191 Euclid Ave.
Paintsville, 41240
PD 5088 48

Picklesimer, Frank M.
Jesse
Ofc. 143 Walnut Ave.
Pointsville, 41240
Res. 143 Walnut Avenue
Paintsville, 41240
502-789-8117
SU 1602 26

Puig, Jr., Francisco U.
Linda
Ofc. Paintsville Clinic
Paintsville, 41240
606-789-8799
Res. North Gote Subdivision
Paintsville, 41240
606-789-8780
OPH 8507 60

Rapier, Jr., Joseph H.
Ofc. Archer Memoriol Clinic
Prestonsburg, 41653
606-886-8553
Res. 338 4th St.
Paintsville, 41653
606-789-1865
ORS 1612 67

Turner, John W.
Gwendolyn
Ofc. 169 Euclid Ave.
Paintsville, 41240
606-789-3511
Res. Inez Road
Paintsville, 41240
606-789-3412
FP 1602 40

KENTON

Air, Clements W.
Nancy C.
Ofc. 754 Robin Ln.
Cavington, 41011
Res. 654 Rabin Lane
Covingtan, 41011
606-341-3754
GP 3441 31

Air, Gordon W.
Darathy
Ofc. 210 Thamas
Moare Pkwy.
Crestview Hills, 41017
606-341-9300
Res. 39 Linden Hill Rd.
Crescent Springs, 41017
606-331-8829
ORS 3441 68

Allen, Faye G.
Quentin
Ofc. 747 Buttermilk Pk.
Cavingtan, 41017
606-341-5740
Res. 29 Ridge Road
Fart Mitchell, 41011
P 1612 71

Allnutt, Richard A.
Besse Lee
Ofc. 900 Medical Village Dr.
Edgewood, 41017
606-331-8333
Res. 112 Wallace Ave.
Edgewood, 41017
606-581-7719
FP 3441 49

Allnutt, Charles F.
Kathleen C.
Ofc. 2660 Shaker Rd.
Covington, 41017
606-581-8855
Res. 2660 Shaker Raad
Lakeside Park, 41017
606-331-6267
R 3408 69

Alvarez, Beda P.
Teresito
Ofc. 320 W. 34th St.
Cavington, 41015
606-431-3864
Res. 778 Watch Point
Cincinnati, OH, 45230
502-231-3297
FP 8507 60

Anneken, Jr., Howard A.
Patricia R.
Ofc. 72 Superior Dr.
Ft. Mitchell, 41017
Res. 72 Superior Ave.
Ft. Mitchell, 41017
606-331-8307
ANES 1602 68

Armitage, James L.
Jaonne
Ofc. 7715 Buckingham Rd.
Cincinnati, OH, 45243
513-241-2370
Res. St. Elizabeth Medicol Center
Covingtan, OH, 41014
513-831-7148
N 1202 61

Asuncion, Forfelito O.
Benilda
Ofc. 722 Scatt St.
Covingtan, 41011
606-491-7616
Res. 134 Williamsburg Drive
Ft. Mitchell, 41017
606-331-0464
GP 5088 64

Baluyot, Agustina A.
Sabina T.
Ofc. 2380 Crisler Ave.
Ft. Mitchell, 41017
606-331-7234
Res. 2380 Crisler Avenue
Ft. Mitchell, 41017
513-871-7278
P 8507 62

Banks, William V.
Pauline
Ofc. 3104 Dixie Hwy.
Erlanger, 41018
Res. 85 Thampsan Avenue
Ft. Mitchell, 41017
PD 1612 67

Barnes, Mary Ann
Ofc. 3057 Village Dr.
Edgewaad, 41017
FP 1602 81

Bieber, Herbert F.
Catherine
Ofc. 6626 Taylor Mill Rd.
Independence, 41051
Res. 6626 Taylar Mill
Independence, 41051
356-5211
GP 3402 29

Bishop, Alexius M.
Ofc. 228 Cherrywood Dr.
Covingtan, 41017
Res. 228 Cherrywood
Ft. Mitchell, 41017
PD 1602 76

Bravo, Joseph J.
Bette C.
Ofc. 2374 Crisler Ave.
Ft. Mitchell, 41017
606-341-4466
Res. 301 Summit Ln.
Ft. Mitchell, 41011
606-341-0090
SU 6401 64

Brogan, John W.
Ofc. 629 Oak St.
Suite 503
Cincinnati, OH 45206
Res. 3104 Dixie Highwoy
Erlanger, 41018
PS 801 60

Brueggemann, Carl J.
Carol K.
Ofc. 325 W. 19th St.
Cavington, 41014
606-291-4768
Res. 401 Werner Dr.
Covington, 41014
606-331-2085
FP 1602 59

Bunnell, Thomas E.
Ofc. 2388 Crisler Ave.
Ft. Mitchell, 41017
Res. 3246 New Orleans Dr.
Ft. Mitchell, 41017
IM 3441 65

KENTON

Burchell, Delanthony
Sue
Ofc. 3928 Dixie Hwy.
Erlonger, 41018
606-727-2331
Res. 3013 Lee Ln.
Edgewood, 41017
IM 1602 76

Burchell, Jr., Eugene J.
Suson J.
Ofc. 3104 Dixie Hwy.
Erlonger, 41018
606-341-2510
Res. 106 Beech Dr.
Edgewood, 41017
606-331-9126
OBG 1602 76

Calico, Forrest W.
Potricio A.
Ofc. 900 Medicol Villoge Dr.
Edgewood, 41017
606-331-8333
Res. 310 Cherrywood Drive
Ft. Mitchell, 41011
606-331-1562
FP 1612 66

Cassidy, John L.
Mory Ann
Ofc. 33 E. 7th St.
Covington, 41011
606-291-1441
Res. 714 Dudley Rd.
Edgewood, 41017
606-341-1050
FP 3441 37

Co, Lucio G.
Juonito F.
Ofc. 225 E. 6th St.
Newport, 41071
606-491-7116
Res. Rt. #4
Moysville, 41056
P 5088 69

Combs, James L.
Borboro A.
Ofc. P.O. Box 14069
Covington, 41014
606-292-4357
Res. 21st ond Eostern Avenues
Covington, 41011
606-586-5694
EM 1612 73

Crabbs, Jerry R.
Glenno
Ofc. 1 W. 43rd St.
Covington, 41015
606-431-3748
Res. 3166 Brookwood Dr.
Edgewood, 41017
606-341-1753
FP 1320 71

Creevy, Joseph A.
Noncy
Ofc. 3104 Dixie Hwy.
Erlonger, 41018
606-341-2672
Res. 117 W. Lokeside Ave.
Lokeside Pork, 41017
606-331-6629
U 3441 69

Cullen, Donal S.
Groinne
Ofc. 3104 Dixie Hwy.
Erlonger, 41018
Res. 3788 Clifton Ave.
Cincinnoti, 45220
PS 7301 63

Daniels, William C.
Koren
Ofc. 210 Thomos Moore Pkwy.
Crestview Hills, 41017
606-341-9300
Res. P.O. Box 360
Burlington, 41005
606-586-6580
ORS 3441 69

Danneman, William G.
Kothy
Ofc. St. Elizobeth Med. Ctr.
Covington, 41014
513-281-6200
Res. 1806 Mt. Vernon Dr.
Ft. Wright, 41011
606-331-2483
H 3440 76

Darnell, Jr., John H.
Brendo A.
Ofc. 1037 Alpine Ct.
Independence, 41051
606-331-8333
Res. 1037 Alpine Ct.
Independence, 41051
606-525-6759
FP 1602 80

Darpel, John A.
Goil
Ofc. 3104 Dixie Hwy.
Erlonger, 41018
606-341-2510
Res. 3110 Hudnoll Lone
Ft. Mitchell, 41017
606-341-2024
OBG 2434 63

De Carvalho, Roberto M.
Ofc. 3104 Dixie Hwy.
Erlonger, 41018
SU 5701 59

Devillez, Elmer E.
Antoinette
Ofc. Greenbrior Dr.
Ft. Mitchell, 41017
Res. Greenbrior Drive
Ft. Mitchell, 41017
PD 1602 30

Dohn, Anita L.
M. Dohn M. D.
Ofc. 900 Medicol Villoge Dr.
Edgewood, 41017
606-331-8333
Res. 3547 Show
Cincinnoti, OH, 45208
513-871-1117
FP 3441 80

Donovan, George T.
Mory C.
Ofc. 39 Erlonger Rd.
Erlonger, 41018
606-727-3399
Res. 101 Groves
Erlonger, 41018
606-727-2277
FP 3441 58

Egan, Thomas E.
Noncy
Ofc. 2382 Crisler Ave.
Plozo
Ft. Mitchell, 41017
606-341-8902
Res. 533 Hermitoge Court
Fort Wright, 41011
606-331-2900
PD 3441 58

Eiseman, Walter R.
Jockie
Ofc. P.O. Box 862
Covington, 41011
606-581-8855
Res. 39 Morion Drive
Covington, 41017
606-331-6068
R 1206 68

Elicker, Edward R.
Deboroh
Ofc. 3104 Dixie
Erlonger, 41018
606-341-2672
Res. 1900 Susonno Lone
Covington, 41011
U 3408 69

Escamilla, Antonio L.
Josephine
Ofc. 2645 Dixie Hwy.
Ft. Mitchell, 41017
606-341-0155
Res. 2645 Dixie Highwoy
Fort Mitchell, 41017
606-341-0178
ANES 8903 52

Eversole, Charles D.
Virginio
Ofc. P.O. Box 862
Covington, 41012
606-581-8855
Res. 205 Fortside Dr.
Ft. Mitchell, 41011
606-331-1589
R 1602 60

Feuss, Jr., Charles
Dorothy G.
Ofc. 405 Gorrord St.
Covington, 41011
606-491-4020
Res. 109 Shelby St.
Covington, 41011
606-291-8230
P 4105 46

Ford, Lowell E.
Polly
Ofc. 2374 Crisler Ave.
Ft. Mitchell, 41017
606-341-6260
Res. Crisler Ave.
Ft. Mitchell, 41017
NS 3440 59

Fragge, Ronald G.
Betty A.
Ofc. 333 Modison
Covington, 41011
606-291-3344
Res. 1923 Fortside Circle
Ft. Mitchell, 41011
A 1602 56

Francisco, Julieta B.
Ofc. 3925 Decoursy St.
Covington, 41015
606-431-1455
Res. 3925 Decoursy St.
Covington, 41015
606-331-6468
IM 5088 53

Garamy, Jr., Frank
Ofc. 747 Buttermilk Pike
Crescent Springs, 41017
606-341-3114
Res. 38 Linden Hill
Crescent Springs, 41017
FP 1602 70

Garrett, Morris M.
Nelle
Ofc. Box 862
Covington, 41012
606-581-8855
Res. 53 Winston Hill
Ft. Thomos, 41075
606-441-3151
R 1602 49

Gaynor, Donal D.
Ann
Ofc. P.O. Box 862
Covington, 41012
606-581-8855
Res. 3123 Glen Ook Ct.
Edgewood, 41017
R 7302 68

Gibson, Smith H.
Lucille H.
Ofc. 726 Greenup St.
Covington, 41011
606-261-2125
Res. 736 St. Motthews
Circle
Covington, 41011
606-291-0164
D 1602 50

Gillingham, Paul M.
Mouro
Ofc. Northern KY Comp.
Core Center
Covington, 41011
606-331-1900
Res. 549 Chisholm Troil
Cincinnoti, OH, 45215
513-522-1103
P 402 68

Golder, Sylvan A.
Foith M.
Ofc. 808 Scott St.
Covington, 41011
606-291-1161
Res. 1071 Celestiol
Covington, 41011
513-241-5131
GP 3441 45

Goodwin, Peter D.
Ofc. St. Elizobeth Hosp.
Covington, 41014
606-292-4353
Res. 425 Front St.
New Richmond, OH, 45157
513-553-6151
EM 1320 72

KENTON

Greiner, Alson L.
Norma Lee
Ofc. 2123 Auburn Ave. #207
Cincinnati, OH, 45219
513-221-1100
Res. 7910 Laneaak Ct.
Cincinnatti, OH 45243
513-561-0627
NS 402 67

Gutierrez, Rosa B.
Ofc. 3104 Dixie Hwy.
Erlanger, 41018
606-341-2103
Res. 434 Black Oak
Edgewood, 41017
606-341-5827
ANES 8504 64

Hallau, Darrell L.
Ofc. 3105 Hudnall Ln.
Cavington, 41017
606-341-7696
Res. 3397 Appletree Dr.
Cavington, 41017
606-341-7696
EM 1602 70

Hardebeck, Charles J.
Ofc. 1516 Monroe St.
Covingtan, 41014
FP 1602 80

Hausladen, Siegfried L.
Borbara A.
Ofc. 3040 Village Dr.
Edgewaod, 41017
Res. 3040 Villoge Drive
Edgewood, 41017
606-341-6216
OTO 1202 76

Heimbrock, Robert G.
Marie
Ofc. 23 Erlanger Rd.
Erlonger, 41018
606-727-1441
Res. 3069 Ashley Drive
Fart Mitchell, 41017
FP 3441 53

Hemmer, Robert E.
Pat
Ofc. 7205 Dixie Hwy. #5
Florence, 41042
606-371-3232
Res. 324 Iris Rd.
Cavingtan, 41011
606-331-1529
PD 3441 55

Heringer, Jr., Howard A.
Joon
Ofc. 2388 Crisler Ave.
Ft. Mitchell, 41017
Res. 2604 Shaker Rd.
Ft. Mitchell, 41017
IM 3441 59

Hermann, George Joseph
Ruth S. Hermann
Ofc. 1290 Boyshare Dr.
Englewood, FL 33533
Res. 1290 Boyshore Drive
Englewood, Florido 33533
813-474-5801
ANES 3441 37

Higgins, Edwin L.
Millie
Ofc. 33 Leathers Rd.
Ft. Mitchell, 41017
Res. 33 Leather Raod
Ft. Mitchell, 41017
606-331-1289
D 3441 41

Hiltz, Lawrence T.
Jinny
Ofc. 622 Buttermilk Pike
Crescent Springs, 41017
606-331-4665
Res. 11 Paul Hesser Dr.
Ft. Mitchell, 41017
606-341-8333
OBG 3441 44

Hiltz, Stephen W.
Ellen W.
Ofc. 3104 Dixie Hwy.
Ste 206
Erlanger, 41018
606-341-3575
Res. 3049 Belle Meode Lane
Edgewood, 41017
606-341-9626
GE 1612 75

Hodges, Pamela S.
James T.
Ofc. 18 N. Ft. Thomas Ave. 2-B
Ft. Thamas, 41075
606-781-6222
Res. 537 N. Revere
Cincinnoti, Ohio, 45230
513-752-4131
OBG 1602 76

Hoffmann, Robert J.
Catherine
Ofc. 2512 Dixie Hwy.
S. Ft. Mitchell, 41017
606-331-3558
Res. 9 Princeton Ave.
S. Ft. Mitchell, 41017
606-331-3420
FP 3441 42

Hugan, Clare C.
Patricia E.
Ofc. 3037 Dixie Hwy.
Edgewaad, 41017
606-341-0666
Res. 1110 Park Dr.
Edgewood, 41017
606-291-4158
IM 1005 53

Huller, Jr., Ralph F.
Rabin
Ofc. 3104 Dixie Hwy.
Erlanger, 41018
606-341-3460
Res. 106 Summit Dr.
Crestview Hills, 41017
IM 1243 71

Humpert, Joseph H.
Morgaret L.
Ofc. 148 Grace Ct. #2
Ft. Mitchell, 41017
606-331-1531
Res. 51 Hudson Ave.
Ft. Mitchell, 41017
606-341-7348
IM 3441 37

Huth, Thomas J.
Marge
Ofc. 4th and Madison Ave.
Cavingtan, 41011
Res. 3 Darmouth
Ft. Mitchell, 41017
SU 3401 48

Im, Yung K.
Ofc. Path. Lab. Raam 11
Erlanger, 41018
606-341-3090
Res. 2512 Rardin Ct.
Villa Hills, 41017
606-341-3878
PATH 7602 52

Jacobs, Alfred A.
Jeonne
Ofc. 3104 Dixie Hwy.
Erlanger, 41018
Res. 3101 Hudnall Lone
Erlanger, 41018
606-341-8244
OBG 1602 57

Janney, W. Donald
Beverly
Ofc. P.O. Bax 862
Cavingtan, 41011
Res. 3101 Elmwood Dr.
Ft. Mitchell, 41017
R 4805 51

Jansen, Carroll A.
Caral W.
Ofc. 2481 Dixie Hwy.
So. Ft. Mitchell, 41017
606-331-1030
Res. 10 Rose Terrace
S. Ft. Mitchell, 41017
606-341-7372
GP 1602 56

Janson, Paul J.
Morilyn
Ofc. 622 Buttermilk Pike
Crescent Springs, 41017
606-331-5355
Res. 1843 Fort Henry Drive
Ft. Wright, 41011
606-421-6000
PD

Jennings, Stephen W.
Koren L.O.B.
Ofc. 747 Buttermilk Pike
Crescent Springs, 41017
606-341-3114
Res. 5 Summe Court
Villa Hills, 41017
FP

Johnson, Robert K.
Judy
Ofc. 210 Thomos More Pkwy.
Crestview Hills, 41017
606-341-9300
Res. 116 University Circle
Ft. Mitchell, 41017
606-341-2685
ORS 1403 60

Kelly, James J.
Virginia
Ofc. 3104 Dixie Hwy.
Erlanger, 41018
Res. 1939 Susan Lane
Ft. Mitchell, 41017
PD 3441 46

Kim, Yoon K.
Ofc. 11 E. 10th St.
Covingtan, 41011
Res. 722 Scatt St.
Cavingtan, 41011
ORS 7604 61

Klingenberg, Paul H.
Margaret R.
Ofc. 636 Madisan Ave.
Raam 607
Cavingtan, 41011
606-431-1360
Res. 44 Lacust Avenue
Ft. Mitchell, 41011
SU 2434 47

Kreilein, Joel G.
Ofc. 3104 Dixie Hwy.
Erlanger, 41018
606-331-8800
Res. 227 E. 3rd
Covingtan, 41011
606-331-8800
PS

Kumpe, Carl W.
Ofc. 2388 Crisler Ave.
Fart Mitchell, 41017
606-341-4441
Res. 2388 Crisler Ave.
Fart Mitchell, 41017
606-331-1133
IM 3441 39

Lanter, Kenneth E.
Betty L.
Ofc. 3104 Dixie Hwy.
Erlonger, 41018
606-341-1550
Res. US Highwoy 42
Bax 48
Unian, 41091
606-384-3134
P 1602 56

Leake, Robert S.
Clara Mae
Ofc. 806 Scatt St.
Covington, 41011
Res. 19 Barrett Dr.
Ft. Thamas, 41075
606-441-3607
U 3441 45

Lee, W. Vernon
Ofc. 727 Scott St.
Cavington, 41012
606-431-4194
Res. 727 Scatt Street
Covington, 41012
606-431-3105
SU 4805 44

Lemal, Paul E.
Ofc. 30 Hally Woods Dr.
Ft. Thamas, 41075
606-781-4442
Res. 5008 Nab Hill Drive
Ft. Thamas, 41075
606-781-1394
OBG 3443 77

Linss, William P.
Potricia M.
Ofc. 90 Faxpire Ln.
Oldsmor, FL, 33557
Res. 90 Foxpire Lane
Oldsmor, FL, 33557
GP 1701 44

KENTON

Lira, Aurora M.
Ofc. 333 Modison Ave.
Covington, 41011
606-291-7374
Res. 1952 Provenciol Dr.
Ft. Mitchell, 41011
606-331-4673
FP 8505 52

Longshore, Robert T.
Jeon
Ofc. 910 Scott St.
Covington, 41011
606-291-5555
Res. 215 Wotch Hill Rd.
Ft. Mitchell,
606-331-2524
FP 1602 57

Lubbe, Ronald J.
Alice
Ofc. 3104 Dixie Hwy.
Covington, 41018
606-341-1101
Res. 2649 Shoker Rd.
Lokeside Pork, 41017
606-341-9424
PD 1602 63

Magary, Victor J.
Joyce
Ofc. 622 Buttermilk Pike
Crescent Springs, 41011
606-331-4665
Res. 225 Cherrywood
Covington, 41011
606-331-4876
OBG 2434 60

Mangat, Devinder S.
Terrie Honcock
Ofc. 747 Buttermilk Pike
Crescent Springs, 41017
606-331-9600
Res. 3 Modison Lane
Cincinnoti, OH, 45208
513-321-2244
SU 1612 73

Marker, Douglas E.
B. J.
Ofc. 210 Thomos More Pkwy.
Crestview Hills, 41017
606-341-9300
Res. 3114 Hudnoll Ln.
Ft. Mitchell, 41017
606-331-9565
ORS 1602 69

Marks, Byron W.
Ofc. 401 E. 20th St.
Covington, 41014
Res. 401 E. 20th Street
Covington, 41014
R 1602 78

Medina, Jr., Artemio S.
Fe
Ofc. 1921 Mt. Vernon Dr.
Ft. Wright, 41011
606-331-0900
Res. 1921 Mt. Vernon Dr.
Covington, 41011
606-341-6308
ANES 5088 71

Menke, Richard J.
Mory Ann
Ofc. 210 Thomos More Pkwy.
Crestview Hills, 41017
606-341-9300
Res. 1 Flower Ct.
Ft. Mitchell, 41017
606-341-4977
ORS 2434 53

Mersch, William J.
Jeon
Ofc. 2374 Crisler Ave.
Covington, 41017
606-341-4570
Res. 2374 Crisler Ave.
Covington, 41017
606-384-4311
SU 3441 53

Messana, Benedict J.
Ofc. St. Elizobeth
Medicol Center
Covington, 41014
606-292-4353
Res. 3445 Forestook Ct.
Cincinnoti, OH, 45208
513-871-9493
EM 3443 77

Middendorf, Mark E.
Mory E.
Ofc. 5522 Toylor Mill Rd.
Toylor Mill, 41015
606-491-2855
Res. 412 Shonnon Drive
Edgewood, 41017
606-331-5772
FP 1602 78

Miles, Douglas R.
Potricio R.
Ofc. 1230 Uplond Ave.
Ft. Wright, 41011
606-331-8333
Res. 1230 Uplond Avenue
Ft. Wright, 41011
606-331-0687
FP 1602 81

Miller, George E.
Ofc. 747 Buttermilk Pike
Crescent Springs, 41017
606-341-5035
Res. 243 N. Colony Drive
Edgewood, 41017
SU 5909 65

Molony, Joseph Thomas
Ofc. 3144 Brookwood Dr.
Edgewood, 41017
Res. 3144 Brookwood Dr.
Edgewood, 41017
606-341-5422
OBG 3408 29

Monnig, William B.
Donno
Ofc. 3104 Dixie Hwy.
Suite 201
Erlonger, 41018
606-341-2672
Res. 1130 Clevelond Ave.
Covington, 41011
606-431-5290
U 3441 69

Morris, Chester A.
Ruth
Ofc. 117 Brent Spence
Sq. #931
Covington, 41011
Res. 117 Brent Spence
Squore #931
Covington, 41011
606-491-6909
GP 1602 25

Moser, Roy J.
Joon
Ofc. 3104 Dixie Hwy.
Erlonger, 41018
606-341-3460
Res. 3266 New Orleons Dr.
Erlonger, 41018
IM 1243 54

Mueller, Maurice J.
Kothy
Ofc. 622 Buttermilk Pike
Crescent Spring, 41011
606-331-4665
Res. 78 Superior Ave.
Ft. Mitchell, 41017
606-341-2723
OBG 3440 62

Nutini, Carl J.
Ofc. 123 Porkwoy
Crestview Hills, 41017
Res. 123 Porkwoy
Crestview Hills, 41017
ANES 1602 46

Nutini, Louis J.
Ofc. 23 Erlonger Rd.
Erlonger, 41018
Res. 2916 Visto Court
Villo Hills, 41016
FP 3441 48

Pelstring, Mark F.
Morgoret W.
Ofc. 325 W. 19th St.
Covington, 41011
606-291-4768
Res. 2004 Greenup Street
Covington, 41014
606-291-4768
FP 1602 74

Perry, Charles R.
Moureen
Ofc. 3104 Dixie Highwoy
Erlonger, 41018
606-341-3460
Res. 244 Cherrywood Drive
Ft. Mitchell, 41011
IM 3441 54

Petit, James M.
Shoron
Ofc. 1419 Alexondrio Pk.
Ft. Thomos, 41075
606-781-0431
Res. 1957 Dione Lone
Ft. Mitchell, 41017
P

Pinho, Maria E.
Ofc. 7540 Indion Hill Rd.
Cincinnoti, OH, 45243
606-491-1348
Res. 207 Garrord St.
Covington, 41010
513-561-4470
P 8601 56

Poweleit, Alvin C.
Loretto
Ofc. 802 Scott St.
Covington, 41011
606-581-2212
Res. 56 Hudson Avenue
Ft. Mitchell, 41017
606-341-7994
ENT 1602 36

Poweleit, Alvin D.
Ruth L.
Ofc. 802 Scott St.
Covington, 41011
606-581-2212
Res. 245 Dudley Rood
Edgewood, 41017
606-341-3670
OPH 1602 60

Putnam, Louis R.
Solly
Ofc. 333 Modison Ave.
Covington, 41011
606-291-3344
Res. 333 Modison
Covington, 41011
606-291-9195
PUD 3101 56

Redden, John D.
Ofc. 909 Scott St.
Covington, 41011
606-581-6063
Res. 1917 Fortside Circle
Covington, 41011
606-331-3704
GP 1602 46

Reeves, John A.
Moureen
Ofc. 3104 Dixie Hwy.
Erlonger, 41018
606-331-4900
Res. 2621 Shoker Rood
Ft. Mitchell, 41017
606-341-9384
OPH 1901 61

Reichert, Robert E.
Dorothy
Ofc. 1080 Lowton Rd.
Covington, 41011
606-261-5086
Res. 1080 Lowton Rood
Covington, 41011
606-261-6086
SU 3441 32

Remo, Eduardo S.
Felicitos
Ofc. 802 Scott St.
Covington, 41011
606-341-8000
Res. 21 Georgetown Avenu
Ft. Mitchell, 41017
606-341-8000
PD 8504 65

Renaker, George A.
Ofc. 3104 Dixie Hwy.
Erlonger, 41018
Res. 117 Musket Rood
Erlonger, 41018
SU 1602 59

KENTON

Rich, James R.
June H.
Ofc. 5975 Taylar Mill
Cavingtan, 41015
606-356-9274
Res. 757 Carol Drive
Covington, 41015
606-356-2658
FP 1602 54

Rison, Allan T.
Ofc. 1 West 43rd St.
Cavingtan, 41015
606-431-3748
Res. 2239 Madisan Avenue
Cavingtan, 41014
606-491-7177
FP 1612 79

Rodriguez, Felicisim B.
Teresita
Ofc. 2815 Werk Rd.
Cincinnati, OH, 45211
606-431-3864
Res. 2815 Werk Rd.
Cincinnati, OH, 45211
502-661-3524
FP 8506 58

Runge, Robert M.
Barbara
Ofc. 210 Thomas Mare Pkwy.
Crestview Hills, 41017
606-341-9300
Res. 53 Shaw Lane
Ft. Thamas, 41075
606-441-9668
ORS 1602 56

Russell, Henry T.
Marge
Ofc. St. Elizabeth Hosp.
Cavingtan, 41014
Res. 55 Lane Drive
Cavingtan, 41014
606-331-7663
PATH

Sahebjami, Nooshafarin
Hamid
Ofc. St. Eliz. Med. Ctr.
Cavingtan, 41014
606-292-4170
Res. 7770 Graves Road
Cincinnati, 45243
513-561-9599
PATH 7102 66

Sampang, Benjamin M.
Jasefina
Ofc. 23 Linden Hill Dr.
Crescent Springs, 41011
606-331-0920
Res. 23 Linden Hill Dr.
Cavingtan, 41011
606-331-9517
ANES 5088 65

Schneider, James J.
Christine M.
Ofc. 7621 Dixie Hwy.
Florence, 41042
606-371-2100
Res. 412 Glenview Ct.
Edgewoad, 41017
606-341-7963
FP 1612 78

Schworer, Philip B.
Marge
Ofc. 333 Madisan Ave.
Cavingtan, 41011
606-291-3344
Res. 130 W. Lakeside
Fart Mitchell, 41017
A 3441 60

Shenk, J. M.
Ofc. 507 Rasemant
Cavingtan, 41011
606-261-6262
Res. 507 Rasemant
Cavingtan, 41011
606-261-6262
GP 1602 51

Sherman, John C.
Ofc. St. Elizabeth Hasp.
Cavingtan, 41014
606-292-4353
Res. P.O. Box 137
Cavingtan, 41012
606-441-7780
EM 1320 70

Sia, Arturo L.
Bernadette
Ofc. 1873 Mt. Vernon Dr.
Covingtan, 41011
606-331-0900
Res. 1873 Mt. Vernan Dr.
Ft. Wright, 41011
606-341-0329
ANES 8507 72

Siehl, John H.
Lauise
Ofc. 944 Dry Valley Ct.
Villa Hills, 41016
Res. 944 Dry Valley Caurt
Villa Hills, 41016
606-341-6633
OBG 3441 36

Siles, James F.
Ofc. 201 E. 38th St.
Cavingtan, 41015
606-431-2120
Res. 201 E. 38th St.
Covington, 41015
606-431-2120
FP 1602 58

Slaughter, David P.
Jan
Ofc. 3928 Dixie Hwy.
Erlanger, 41018
606-727-2331
Res. 3928 Dixie Highway
Erlanger, 41018
606-727-2331
IM 3441 76

Smith, Edward L.
Mary Eva
Res. 3712 Park Dr.
Latania, 41015
GP 1602 34

Smith, Robert E.
Alice
Ofc. One W. 43rd St.
Cavington, 41015
606-431-3748
Res. 614 Oak Ridge Dr.
Edgewood, 41017
606-341-6669
FP 1602 59

Snider, Bruce A.
Margie
Ofc. 210 Thomas Mare Pkwy.
Crestview Hills, 41017
606-341-5014
Res. 556 Sutter Drive
Edgewaad, 41017
P 1602 72

Standiford, Edward C.
Ofc. St. Elizabeth Med. Ctr.
Covingtan, 41017
Res. St. Eliz. Med. Ctr.
Cavingtan, 41017
FP 1602 79

Sterneberg, Steven B.
Ofc. 341 Delmar Place
Cavingtan, 41014
606-292-4000
Res. 341 Delmar Place
Cavington, 41014
FP

Stevie, John R.
Margaret Ann
Ofc. 3104 Dixie Hwy.
Erlanger, 41018
606-341-2510
Res. 1006 Park Dr.
Cavingtan, 41011
606-261-8545
OBG 1602 53

Strawn, Robert L.
Diane
Ofc. 3104 Dixie Hwy.
Erlanger, 41018
606-331-4900
Res. 36 Locust Ave.
Ft. Mitchell, 41017
606-331-5992
OPH 3441 62

Suetholtz, David W.
Tess
Ofc. 5522 Taylar Mill Rd.
Taylor Mill, 41015
606-491-2855
Res. 12 Larup Dr.
Ft. Wright, 41011
606-341-3333
FP 1602 74

Swikert, Nancy C.
Danald Jaseph
Ofc. 8172 Mall Raad
Suite 231
Flarence, 41042
606-525-6247
Res. 3480 Misty Creek Drive
Erlanger, 41018
606-331-6656
FP 1602 77

Swikert, Donald J.
Nancy Crawford
Ofc. 8172 Mall Raad
Suite 231
Flarence, 41042
606-525-6247
Res. 3480 Misty Creek Drive
Erlanger, 41018
606-331-6656
FP 1612 77

Temple, William J.
Hilda
Ofc. 20th & Eastern Ave.
Covingtan, 41014
606-292-4213
Res. 2708 Main Chase Lane
Ft. Mitchell, 41017
606-341-7889
PD 1602 43

Van Dermark, Jonathan Gay
Margaret
Ofc. 2512 Dixie Hwy.
Sa. Fart Mitchell, 41017
606-331-2545
Res. 829 Aberdeen Road
Park Hills, 41011
606-261-7675
PD 3441 31

Vesper, Albert J.
Ofc. 8695 Burlingtan Pk.
Florence, 41042
SU 3441 33

Vesper, III, Albert J.
Ofc. 8695 Burlingtan Pike
Flarence, 41042
606-283-2229
Res. 709 St. Jaseph Lane
Cavingtan, 41011
606-581-2715
PD 3441 67

Walsh, Maurice R.
Mary E.
Ofc. 3051 Edgemar Dr.
Cavington, 41017
Res. 3051 Edgemar Drive
Cavingtan, 41017
606-341-4026
R 3441 36

Weber, Melvin J.
Darathy C.
Ofc. 186 Saddle Ridge
Burlingtan, 41005
606-586-8870
Res. 186 Saddle Ridge
Burlingtan, 41005
606-586-8870
GP 3441 38

Weber, Robert D.
Ann
Ofc. 2388 Crisler
Fart Mitchell, 41017
606-341-4442
Res. 219 Calany Caurt
Edgewaad, 41017
IM 3441 69

Weldon, Thomas A.
Harald Brawn
Ofc. 1923 Scatt Blvd.
Cavingtan, 41014
606-261-6033
Res. 111 Iris Raad
Ft. Mitchell, 41011
606-341-6864
P 1243 51

Wells, Henry A.
Gayle
Ofc. 619 Buttermilk Pike
Covington, 41017
606-341-5030
Res. 73 Sunnymede Drive
Ft. Mitchell, 41017
A 3901 64

Wippermann, Edgar D.
Marilyn
Ofc. 3161 Dixie Hwy.
Erlanger, 41018
Res. 2624 Shaker Road
Lakeside Park, 41017
606-341-7958
OTO 4805 47

Woodyard, John R.
Helen
Ofc. 3161 Dixie Hwy.
Erlanger, 41018
Res. 127 Penwaad Raad
Lakeside Park, 41017
606-341-0991
OTO 3441 45

Worcester, Dorothy B.
Ofc. 108 Fayette Circle
Covingtan, 41011
Res. 108 Fayette Circle
Fart Wright, 41011
606-331-3128
GP 1206 36

Yamaguchi, Jr., Ben T.
Nita B.
Ofc. 3104 Dixie Hwy.
Erlanger, 41018
513-341-8670
Res. 2789 Dunaway Avenue
Cincinnati, 45211
513-481-2905
PATH

Yates, William R.
Phyllis
Ofc. 543 Terry Ln.
Crescent Springs, 41017
606-341-2332
Res. 277 Allentown Drive
Ft. Mitchell, 41017
606-331-5980
FP 1602 61

Ziaie, Bahram
Fiaraagh Jazy
Ofc. 722 Scatt St.
Cavingtan, 41001
431-3052
Res. 8450 Blue Cut Lane
Cincinnati, OH, 45243
984-6786
P 5088 66

Ziegler, Vincent E.
Leslie
Ofc. 210 Thamas More Pkwy.
Crestview Hills, 41017
606-341-5074
Res. 1953 Diane Drive
Ft. Mitchell, 41011
606-331-5678
P 1612 72

KNOTT

Barker, Denzil G.
Gladys M.
Ofc. P.O. Drawer D.
Hindman, 41822
606-785-3175
Res. Hindman, 41822
FP 1701 42

KNOX

Acosta, Corazon B.
Ragelia A.
Ofc. Dactar's Clinic
Barbaurville, 40906
606-546-6912
Res. 101 Short St.
Barbaurville, 40906
606-546-6839
IM 8502 62

Acosta, Rogelio A.
Carazan B.
Ofc. Dactor's Clinic
Barbourville, 40906
606-546-5513
Res. 101 Shart St.
Barbaurville, 40906
606-546-6839
SU 8502 61

Bushey, Harold L.
Eulene
Ofc. 406 Knax St.
Barbaurville, 40906
606-546-3024
Res. Raute 3, Bax 13
Barbourville, 40906
606-546-4472
IM 3145 54

Crisostomo, Rufino F.
Teresita S.
Ofc. 321 High St.
Barbaurville, 40906
606-546-5414
Res. 321 High St.
Barbourville, 40906
606-546-3365
OBG 5088 61

Gill, Stephen Boyd
Jeanne B.
Ofc. 502 Narth Main St.
Barbaurville, 40906
606-546-9251
Res. Pine Street
Barbourville, 40906
606-546-3465
FP 904 79

Hayden, Raymond E.
Vialetta
Ofc. 320 High St.
Barbaurville, 40906
606-546-4566
Res. 247 Sampsan Lane
Barbaurville, 40906
606-546-3184
PD 2434 58

Hayden, Violetta T.
Raymand
Ofc. 320 High St.
Barbaurville, 40906
606-456-4566
Res. 247 Sampsan Lane
Barbaurville, 40906
606-546-3184
PD 7401 56

Vora, Raju N.
Ofc. Knox Caunty
General Hasp.
Barbaurville, 40906
606-546-6624
Res. 106 Miracle Drive
Barbaurville, 40906
606-546-5747
IM 5088 74

LAWRENCE

Carter, George P.
Alice Joy
Ofc. Lauisa Medical Clinic
Lauisa, 41230
606-638-4595
Res. Lauisa, 41230
606-638-4572
FP 1602 49

Ortines, Cesar G.
Minerva W.
Ofc. Lauisa Cammunity Hosp.
Lauisa, 41230
606-638-4017
Res. Rt. 5
Lauisa, 41230
606-638-4994
OBG 5088 64

Sola, Venkateswara R.
Vasanthn
Ofc. Lauisa Cammunity
Hasp. Radialogy
Louisa, 41230
606-638-4175
Res. Point Section
Lauisa, 41230
606-638-9299
R 7019 71

LEE

Smith, John M.
Patty S.
Ofc. Smith Clinic
Bax 170
Beattyville, 41311
606-464-2946
Res. Beattyville, 41311
606-464-3330
FP 1602 49

Taulbee, Arnold L.
Ofc. General Delivery
Beattyville, 41311
Res. General Delivery
Beattyville, 41311
GP 4106 62

LESLIE

Morris, Peter J.
Ofc. Frantier Nursing Serv.
Hyden, 41749
606-672-2901
Res. Frantier Nursing Serv.
Hyden, 41749
606-672-2971
PD 3201 78

LETCHER

Adams, Lundy
Mary Ann
Ofc. 373 Hazard Rd.
Whitesburg, 41858
606-633-4436
Res. Rt. #1, Box 208
Jeremiah, 41826
606-633-0022
GP 4106 43

Arroz, Vincent C.
Ofc. Daniel Boone Clinic
Whitesburg, 41858
606-633-4414
Res. Jenkins Raad
Whitesburg, 41858
SU 8507 58

Buller, Paul H.
Debra K.
Ofc. Daniel Baone Clinic
Whitesburg, 41858
606-633-4414
Res. Rt. #1, Box 2D
Whitesburg, 41898
FP 3443 78

Caizzi, Kathleen A.
Ofc. 107 E. Main St.
Whitesburg, 41858
606-633-4871
IM

Craig, Cedric
Ofc. Daniel Boone Clinic
Whitesburg, 41858
Res. Jenkins Road
Whitesburg, 41858
PD 5088 63

Dick, John M.
Ofc. P.O. Bax 884
Jenkins, 41537
FP 1320 79

Gillespie, Harold R.
Ofc. P.O. Bax 804
Whitesburg, 41858
Res. Terry Drive
Mt. Sterling, 40353
SU 4106 55

Haas, Christopher T.
Sandra
Ofc. 600 Jenkins Rd.
Whitesburg, 41858
606-633-4414
Res. Jenkins Rd.
Whitesburg, 41858
606-633-8187
FP 3440 76

Law, Robert K.
Ofc. 107 E. Main St.
Bax 1030
Whitesburg, 41858
GP 1475 81

Nash, Arthur J.
Shelia Leyvanne
Ofc. Jenkins Clinic
Jenkins, 41537
606-832-2171
Res. Jenkins, 41537
606-832-4044
ANES 406 52

Pellegrini, John L.
Ofc. Bax 983
Whitesburg, 41858
606-633-2261
Res. 107 Vermillian Ave.
Whitesburg, 41858
606-633-5393
SU 2001 72

Pigman, Carl
Ofc. P.O. Box 390
Whitesburg, 41858
606-633-2320
Res. Madison
Whitesburg, 41858
606-633-2966
GP 1901 36

Ranade, Nilkanth Bapu
Ofc. Daniel Boone Clinic
Whitesburg, 41858
SU 5088 72

Stevenson, Richard V.
Ofc. Appalachian Reg. Hasp.
Whitesburg, 41858
Res. Green Lane
Kenmare Co.
Kerry, Ireland
FP 1211 36

Tidal, Abubakar H.
Angelina R.
Ofc. Daniel Boone Clinic
Whitesburg, 41858
606-633-4414
Res. 103 Callier Court
Whitesburg, 41858
606-633-5644
IM 5088 70

Valdes, Juan
Ofc. Jenkins Clinic
Jenkins, 41537
832-2171
Res. Jenkins, 41537
832-4987
GP

Zerzavy, Frederick M.
Darathy G.
Ofc. 107 E. Main St.
POB 1030
Whitesburg, 41858
606-633-4871
Res. 107 E. Main St.
P.O. Box 1030
Whitesburg, 41858
606-633-9490
OBG

LEWIS

Esham, Elwood
Ruth O.
Ofc. Bax 236
Vanceburg, 41179
Res. 601 Halbert Avenue
Vanceburg, 41179
606-796-2079
GP 1602 39

LINCOLN

Bates, Rodney K.
Jean S.
Ofc. P.O. Box 447
Stanford, 40484
606-365-2102
Res. RR 2, U.S. 27
Stanford, 40484
606-365-9232
FP 1612 71

Click, C. Glen
Karan
Ofc. P.O. Box 356
Stanford, 40484
606-365-9181
Res. Partman Ave.
Stanford, 40484
606-365-9700
FP 1612 71

Crase, Charles E.
Ofc. 126 Partman Ave.
Stanford, 40484
606-365-9181
Res. 106 Oakwood Drive
Stanford, 40484
FP 1612 72

Heinz, Wilbur A.
Ofc. P.O. Box 447
Stanford, 40484
Res. Stanford, 40484
R 4105 62

Milholen, Linda S.
Bruce
Ofc. P.O. Box 356
Stanford, 40484
606-365-9181
Res. Stanford, 40484
606-365-3770
SU 1005 74

Rice, William M.
Jeanie
Ofc. P.O. Box 356
Stanford, 40484
606-365-9181
Res. 419 Danville St.
Stanford, 40484
606-365-7168
FP 1612 77

LIVINGSTON

Barnes, William E.
Jamie A.
Ofc. P.O. Bax 126
Salem, 42708
Res. P.O. Bax 126
Salem, 42708
502-988-2882
SU 1243 76

Brandstetter, Thomas R.
Ofc. P.O. Bax 215
Salem, 42078
502-988-3318
GP 1602 62

Burkhart, Stephen
Jean
Ofc. P.O. Bax 6
Salem, 42078
502-988-3839
Res. Bax 6
Salem, 42078
502-988-3200
FP 1602 55

Conyer, William R.
Ofc. P.O. Bax 286
Salem, 42078
502-988-2251
Res. P.O. Bax 286
Salem, 42078
GP 1612 80

Faulkner, Roscoe
Ofc. P.O. Bax 5
Salem, 42078
Res. Salem, 42078
GP 4106 30

Gavin, Michael P.
Nancy Gavin
Ofc. P.O. Box 258
Salem, 42078
502-988-3318
Res. R. R. 2, Box 3
Salem, 42078
502-988-3094
GP 1211 76

LOGAN

Dodson, Carlisle V.
Martha O.
Ofc. 153 S. Summer St.
Russellville, 42276
502-726-7663
Res. 153 S. Summer St.
Russellville, 42276
502-726-6547
FP 1602 43

Dodson, James C.
Jane
Ofc. 147 E. 5th St.
Russellville, 42276
502-726-8331
Res. 147 E. 5th St.
Russellville, 42276
502-728-8593
IM 1701 76

Glenn, John P.
Vannie
Ofc. 151 W. Fifth St.
Russellville, 42276
502-726-7223
Res. W. Fifth St.
Russellville, 42276
SU 1602 32

Holt, Jack B.
Pat J.
Ofc. 157 W. Fifth St.
Russellville, 42276
502-726-7881
Res. 157 West Fifth St.
Russellville, 42276
502-726-9883
SU 4105 59

Martin, Lewis E.
Ofc. East 4th St.
Russellville, 42276
502-726-9880
Res. Rt. 3, Bax 281
Russellville, 42276
502-726-9600
IM 1602 63

Mathis, Charles H.
Jane
Ofc. 597 E. 4th St.
Russellville, 42276
502-726-9549
Res. Raute #3
Cardinal Drive
Russellville, 42276
502-726-6930
FP 4106 60

McEndre, Roy B.
Caral
Ofc. P.O. Bax 92
Lewisburg, 42256
502-755-4837
Res. P.O. Box 92
Lewisburg, 42256
502-775-4839
FP 1602 55

Northern, Dana Karen
Keith J.
Ofc. Church St.
Adairville, 42202
502-539-3301
Res. Rt. #5
Russellville, 42276
502-726-8025
FP 1602 80

Pathak, Jitendra A.
Kumja J.
Ofc. 401 W. 4th St.
Russellville, 42276
502-726-8411
Res. Box 350-B
Russellville, 42276
502-726-3942
SU 7003 63

Pathak, Kunja J.
Jitendra
Ofc. 401 W. 4th St.
Russellville, 42276
502-726-8411
Res. Box 350-B
Russellville, 42276
502-726-3942
OBG 7004 65

Threlkeld, Thomas G.
Anna Lisle
Ofc. 709 E. 4th St.
Russellville, 42276
502-726-7638
Res. 101 Dale View Circle
Russellville, 42276
502-726-6660
GP 1602 53

Wood, Dewey E.
Ofc. 210 S. Bethel St.
Russellville, 42276
Res. 201 Lynwaod Dr.
Russellville, 42276
FP 1602 60

LAUREL

Adams, Samuel M.
Barbara
Ofc. Medical Arts Bldg.
Landan, 40741
606-864-4137
Res. 108 Skyline
Landan, 40741
606-864-2422
GP 1602 46

Barr, George W.
Leslie
Ofc. P.O. Bax 495
E. Bernstadt
Landan, 40741
606-876-9121
Res. Bax 442, Raute 12
Landon, 40741
606-864-2928
FP 5901 76

Ison, Claude B.
Ofc. Rt. 10
London, 40741
GP 1612 35

Jones, Boyce E.
Ofc. Medicol Arts Bldg.
London, 40741
Res. 218 W. First
London, 40741
PUD 1602 43

Pratt, William D.
Peggy A.
Ofc. Medicol Arts Bldg.
London, 40741
606-878-6030
Res. 213 West Dixie St.
London, 40741
606-864-6001
FP 1612 67

Prots, Robert A.
Bonnie
Ofc. Medicol Arts Bldg.
London, 40741
Res. London, 40741
SU 3406 62

Rastogi, Gopal K.
Indra
Ofc. Medicol Arts Bldg.
London, 40741
606-878-8100
Res. Rt. #12, Box 447
London, 40741
606-878-7395
IM 5088 58

Rypstra, John B.
Dono
Ofc. Medical Arts Bldg.
London, 40741
606-864-2828
Res. Route 12, Box 367
London, 40741
606-864-6143
FP 1320 47

Smith, Paul R.
Ann
Ofc. Medicol Arts Bldg.
London, 40741
606-864-2179
Res. 505 E. Ninth St.
London, 40741
606-864-2077
FP 1602 56

LARUE

Bradbury, John William
Octavio E.
Ofc. 3507 Dominique
Golveston, TX, 77551
Res. 3507 Dominique
Golveston, TX, 77551
713-744-4212
GP 1602 37

Douglass, Jr., Marion A.
Lori
Ofc. Box 57
Mognolio, 42757
502-324-3241
Res. Box 268
Hodgenville, 42768
502-325-3434
FP 1602 55

Smith, Jerry R.
Morietto
Ofc. 207 W. Main St.
Hodgenville, 42748
Res. Route 1, Box 395
Hodgenville, 42748
FP 6602 71

LYON

Hiland, Steve
Ofc. P.O. Box 594
Eddyville, 42038
502-388-9764
Res. Eddyville, 42038
502-388-9517
SU

Moseley, Mortimer H.
Ofc. P.O. Box 487
Eddyville, 42038
502-388-7171
Res. E. Spring St.
Eddyville, 42038
502-388-7171
FP 1320 44

MADISON

Allen, William R.
Pottris
Ofc. 244 Boggs Ln.
Richmond, 40475
606-623-5920
Res. Route 7
Rose Hills
Richmond, 40475
606-624-2482
U 4106 74

Barron, Michael P.
Shirley L.
Ofc. 632 Eostern ByPass
Richmond, 40475
606-623-5986
Res. 103 Forest Hill Dr.
Richmond, 40475
606-623-5041
IM 4402 67

Blackburn, Dwight L.
Dorothy
Ofc. P.O. Box 406
Bereo, 40403
606-986-8452
Res. P.O. Box 406
Berea, 40403
606-986-3455
FP 1602 55

Bowling, R. Eugene
Sophia S.
Ofc. 527 W. Moin St.
Richmond, 40475
Res. Rt. 1
Bornes Mill Rd.
Richmond, 40475
606-623-1950
FP 1701 55

Clark, Arch B.
Ann Q
Ofc. 527 West Moin St.
Richmond, 40475
606-623-3758
Res. Foirlone Drive
Richmond, 40475
606-623-1710
GP 1602 49

Cloys, Don E.
Jo Helen
Ofc. University Shopping Ctr.
Richmond, 40475
606-623-9113
Res. 354 Loncoster Avenue
Richmond, 40475
606-623-4220
SU 1612 67

Coy, III, James T.
Ofc. 310 Geri Ln.
Richmond, 40475
606-623-9541
Res. Rt. 1, Box 73
Richmond, 40475
ORS 1612 72

Desai, Suvas G.
Nimo
Ofc. 210 St. George Pork
#203
Richmond, 40475
606-623-0202
Res. 210 St. George Pork
Richmond, 40475
606-266-3625
U 7003 67

Epling, William D.
Francis
Ofc. Bereo, 40403
606-254-1336
Res. 151 Lorroine Ct.
Bereo, 40403
606-986-3322
ANES 1602 54

Fagan, Linda S.
Ofc. 3 Keenfield
Richmond, 40475
Res. Heolth Deportment
Richmond, 40475
PH 1602 66

Fritz, Samuel D.
Lindo
Ofc. 244 Boggs Ln.
Richmond, 40475
606-623-0984
Res. Rt. 2, Loncaster Rd.
Richmond, 40475
606-623-3861
SU 1612 69

Fuller, Jr., Elzer T.
Judy
Ofc. 210 St. George St.
Suite 22
Richmond, 40475
606-623-8105
Res. R.R. 4
Totes Creek Estotes
Richmond, 40475
606-623-6648
FP 1612 76

Gates, Dorothy G.
Ofc. Bereo College Hosp.
Berea, 40403
606-986-3151
Res. 123 Lorroine Ct.
Bereo, 40403
606-986-8230
GP 3406 39

Gordon, John M.
Jone
Ofc. 694 Eostern Byposs
Richmond, 40475
606-624-2010
Res. Rt. 7, Hickory Hills
Richmond, 40475
606-524-2079
OBG 1602 72

Harris, Charles R.
Justine F.
Ofc. Bereo Hosp.
Bereo, 40403
606-986-3151
Res. 401 Jockson St.
Bereo, 40403
606-986-3238
GP 3145 40

Hechema, Cherif E.
Ofc. P.O. Box 445
Bereo, 40403
606-986-3331
Res. Route #3
Dogwood Drive
Bereo, 40403
606-986-8884
SU 5088 50

Husband, Lowell S.
Elizobeth M.
Ofc. Bereo College
Heolth Service
Bereo, 40404
606-986-3151
Res. 221 Prospect Street
Bereo, 40405
606-986-2753
P 2301 66

Hutchins, Louise F.
Froncis S.
Ofc. College
P.O. Box 2299
Bereo, 40404
606-986-3533
PH 601 36

Jenkins, Douglas H.
Virginio
Ofc. 527 W. Moin
Richmond, 40475
606-623-3751
Res. Loncoster Rd.
Richmond, 40475
606-623-1560
SU 1602 49

Johnstone, John M.
Sondro L.
Ofc. Berea Hosp.
Berea, 40403
606-986-9319
Res. 1 Fairwoy Drive
Bereo, 40403
606-986-9223
IM 1602 74

Johnstone, William H.
Brendo S.
Ofc. 503 Prospect St.
Bereo, 40403
606-986-9319
Res. 503 Prospect St.
Bereo, 40403
606-986-2506
R 1602 78

Kerby, Clifford F.
Ofc. P.O. Box 110
Bereo, 40403
606-986-8418
Res. Ridge Ave.
Berea, 40403
606-986-4459
GP 4106 60

Krumpleman, Jr., Jerome L.
Ruth
Ofc. Chief Rod.
Pottie Cloy Hosp.
Richmond, 40475
606-623-3131
Res. 210 Geri Lone
Richmond, 40475
606-624-2695
R 1612 71

Lewis, Jack D.
Mory Beth
Ofc. Box 403
Bereo, 40403
606-986-8400
Res. 15 Mt. View Est.
Bereo, 40403
606-986-9248
GP 1602 60

Long, Robert J.
Ofc. P.O. Box 456
Bereo, 40403
606-986-3181
Res. Box 465
Bereo, 40403
606-986-1607
GP 1602 64

Mahaffey, Hugh
Ofc. 134 N. Secand St.
Richmond, 40475
606-623-1324
Res. 112 Sunset Ave.
Richmond, 40475
606-623-1260
SU 1602 28

Maionchi, Paula M.
Ofc. Suite 102
210 St. George Pork
Richmond, 40475
606-624-2290
Res. 606-624-2078
IM 1612 71

Mitchell, William H.
Winnie
Ofc. 1127 W. Main St.
Richmond, 40475
606-623-1610
Res. Route 7
Rose Hills
Richmond, 40475
606-624-1610
SU 1612 70

Munnell, Daniel M.
Elizobeth
Ofc. 130 No. 2nd St.
1st Floor
Richmond, 40475
Res. 400 Breck Avenue
Richmond, 40475
600-623-1339
ENT 2007 34

Reynolds, Glynn E.
Betty J.
Ofc. 210 St. George St.
Richmond, 40475
606-623-3260
Res. Box 742
Richmond, 40475
606-623-5424
FP 1612 67

Rice, Robert L.
Mary Lou
Ofc. 527 W. Moin St.
Richmond, 40475
Res. Raute #2
Elliott Ford Rd.
Richmond, 40475
606-623-1474
ANES 1602 39

Salter, Jr., James I.
Mary L.
Ofc. 694 Eastern By Poss
Richmond, 40475
606-624-2010
Res. West Moin Street
Richmond, 40475
606-623-0021
OBG 1602 53

Spurlin, Geraldine W.
Rudolph L.
Ofc. P.O. Box 6
Richmand, 40475
606-623-1404
Res. P.O. Box 6
Richmond, 40475
606-623-9442
OBG 1612 68

Tobin, Stuart
Potricio
Ofc. 210 St. George St.
Richmond, 40475
606-623-4241
Res. 144 Virginio Dr.
Richmond, 40475
606-623-5673
D 2403 71

Veurink, Charles H.
Mory
Ofc. 310 Geri Ln.
Richmond, 40475
606-623-9541
Res. 108 Pleosont Ridge
Richmond, 40475
606-623-7844
ORS 2101 68

Webb, Warren S.
Lindo Jeonne
Ofc. 210 St. George Pk.
Richmond, 40475
606-624-2020
Res. Route #10 Idylwilde
Richmond, 40475
606-624-1868
PD 1612 74

MAGOFFIN

Gaurano, Rosalie M.
Ofc. Box 544
Solyersville, 41465
PD 5088 55

MASON

Beineke, Daniel D.
Ofc. Meadowview Reg.
Hosp., Rod.
Maysville, 41056
Res. 7415 Boyswater
Cincinnoti, OH, 45230
R 3441 67

Blake, Robert M.
Nomo
Ofc. 611 Forest Ave.
Moysville, 41056
Res. Buffolo Trace
Maysville, 41056
FP 1602 56

Cardenas, Glenn D.
Tomie Jeon
Ofc. 611 Forest
Moysville, 41056
Res. P.O. Box 92
Maysville, 41056
SU 7901 47

Cummins, Jr., Claude E.
Jeonette
Ofc. P.O. Box 187
Washington, 41096
606-759-7177
Res. #1359 Meffort Hgts.
Maysville, 41056
606-564-3417
FP 1602 55

Denham, Mitchel B.
Horriet
Ofc. 611 Forest Ave.
Maysville, 41056
Res. 20 Bryont Circle
Moysville, 41056
606-564-3711
GP 1602 40

Denham, Harry C.
Minki C.
Ofc. 611 Forest Ave.
Maysville, 41056
606-564-3611
Res. Moysville, 41056
606-564-3611
SU 1602 44

Dennison, Joseph R.
Gole A.
Ofc. 1 West McDonold Pkwy.
Moysville, 41056
606-564-6804
Res. 17 W. 3rd Street
Moysville, 41056
606-564-4551
U 2402 68

Estill, George E.
Bonnie
Ofc. 611 Forest Ave.
Moysville, 41056
606-564-3432
Res. 502 W. Second St.
Moysville, 41056
606-564-3095
FP 802 52

Franz, Lyle C.
Chris
Ofc. U.S. Highwoy 68 So.
Moysville, 41056
606-564-3830
Res. 504 W. Second Street
Moysville, 41056
606-564-6323
GP 1602 38

Grosser, Timothy T.
Mory
Ofc. 1A W. McDonold Pkwy.
Moysville, 41056
606-564-9043
Res. Rt. 1, Box 77
Maysville, 41056
606-564-5206
FP 1602 76

McKinney, Joseph E.
Amelia
Ofc. 1 W. McDonold Pkwy.
Moysville, 41056
606-564-2473
Res. J.N. Browning
Med. Arts Bldg.
Maysville, 41056
513-795-2473
IM 1602 48

Moss, Kelly G.
Betty
Ofc. 611 Forest Ave.
Maysville, 41056
606-564-3331
Res. Jersey Ridge Rd.
Maysville, 41056
606-564-5883
FP 1612 66

Prater, Bryan N.
Ofc. 1 W. McDonold Pkwy.
Suite 3B
Maysville, 41056
Res. Maysville, 41056
OPH 1612 73

Ross, Paul J.
Ofc. Rt. 2, Box 504
Mayslick, 41055
Res. 102 Old Bon Ct. #4
Louisville, 40222
502-426-8525
NS 1602 46

Sanders, Garry
Sheila A.
Ofc. #14 West 4th St.
Moysville, 41056
606-564-5576
Res. 1 West McDonold Pkwy.
Moysville, 41056
606-564-4995
IM 1602 76

Shouse, Leroy
Dione S.
Ofc. Browning Med. Bldg.
Suite B
Maysville, 41056
606-564-3351
Res. 7 West 3rd Street
Maysville, 41056
606-564-6466
ORS

Williams, James D.
Michele A.
Ofc. 7623 Dixie Hwy.
Suite 125
Florence, 41042
606-371-5660
Res. 248 Narth Calany Dr.
Edgewaad, 41017
606-331-7213
U 1320 74

Wilson, Donald R.
Debbie W.
Ofc. One McDanald
Pkwy. 2A
Maysville, 41056
606-564-9055
Res. Rt. 5
Maysville, 41056
OBG 1612 76

MCLEAN

Coleman, Everett S.
Linda
Ofc. E. Main St.
Sacramenta, 42372
Res. Bax 198
Sacramento, 42372
FP 1602 55

Scott, Samuel E.
Ofc. Livermare, 42352
GP 4105 57

Wilhite, Hugh H.
Ofc. Calhoun, 42327
FP 1602 66

MCCRACKEN

Abell, Jr., Harry D.
Jayce
Ofc. P.O. Bax 7233
Paducah, 42001
502-442-2744
Res. 123 Hilldale
Paducah, 42001
502-443-1255
OPH 1901 47

Adams, James E.
Faye C.
Ofc. Katterjohn Bldg. #116
Paducah, 42001
502-442-6191
Res. 3835 Cleary Dr.
Paducah, 42001
502-443-7362
P 1602 60

Adams, Jr., William E.
Jane
Ofc. 3639 Marlbaraugh Way
Paducah, 42001
Res. 3639 Marlbarough Way
Paducah, 42001
R 1612 75

Austin, III, Frederick D.
Cheryl
Ofc. 230 Berger Rd.
Paducah, 42001
502-442-8800
Res. 4025 Buchner Lane
Paducah, 42001
IM 3201 67

Barlow, Ronald G.
Nancy J.
Ofc. Western Baptist Hosp.
Paducah, 42001
502-444-5180
Res. Western Baptist Hosp.
Paducah, 42001
502-898-6655
EM 1602 75

Barnard, W. Winston
Dorothy
Ofc. 100 Fauntain Ave. 301
Paducah, 42001
502-443-2015
Res. 502 Waadland Dr.
Paducah, 42001
P 4106 51

Bassi, Joseph A.
Ofc. 1901 Kentucky Ave.
Paducah, 42001
502-442-3559
Res. Rt. #6
378 Jewell Ln.
Paducah, 42001
IM 2434 77

Billington, Charles B.
Darathy S.
Ofc. P.O. Bax 7534
Paducah, 42001
Res. 269 Cedar Lane
Paducah, 42001
502-442-5031
IM 4106 34

Bippert, Curtis E.
Cindy
Ofc. P.O. Bax 1493
Paducah, 42001
502-442-3516
Res. P.O. Bax 1493
Paducah, 42001
GP 2006 44

Blalock, William N.
Rudell
Ofc. 642 Bellevue Dr. N.
Paducah, 42001
Res. 642 Bellevue Dr. N.
Paducah, 42001
502-442-0788
GE 2402 52

Blanton, Chester M.
Frances
Ofc. 750 Shaker Dr. 712
Lexingtan, 40504
Res. 750 Shaker Dr. 712
Lexingtan, 40504
606-277-4242
D 1602 33

Bohle, Charles J.
Velma Rase
Ofc. P.O. Box 7307
Paducah, 42001
502-442-7181
Res. P.O. Bax 7307
Paducah, 42001
502-444-7572
OBG 802 56

Boom, Jr., Paul
Ofc. P.O. Bax 7292
Paducah, 42001
502-444-5115
Res. Rt. #1, Bax 241
Childress Rd.
Paducah, 42001
R 1005 68

Borodofsky, Jr., Theodore
Suzanne
Ofc. 1903 Broadway
Paducah, 42001
Res. 234 Maxfield Dr.
Paducah, 42001
OPH 4106 69

Bradford, Benjamin F.
Elizabeth
Ofc. 2330 Braadway
Paducah, 42001
502-442-4212
Res. 656 N. 36th Street
Paducah, 42001
502-443-7357
IM 1705 48

Brigance, William H.
Julie
Ofc. 220 Lane Oak Rd.
Paducah, 42001
502-442-3530
Res. Rt. 12, Bax 53
Paducah, 42001
502-554-0133
U 1701 64

Brown, Collins D.
Cil
Ofc. Laurdes Hosp.
Paducah, 42001
Res. 1100 Olde
Friedman Lane
Paducah, 42001
R 1612 65

Bruce, William M.
Dot
Ofc. 617 No. 30th St.
Paducah, 42001
502-443-7534
Res. 1260 High St.
Paducah, 42001
502-442-4464
PD

Burris, John C.
Nadine
Ofc. P.O. Bax 7100
Paducah, 42001
502-442-4117
Res. 4333 St. Charles Ct.
Paducah, 42001
502-443-1224
R 1602 56

Burrow, Woody G.
Marsha
Ofc. 3021 Lane Oak Rd.
Paducah, 42001
502-554-1961
Res. Rt. 11, Rushing Rd.
Paducah, 42001
FP 4106 61

Campbell, Carey W.
Ofc. 240 Berger Rd.
Paducah, 42001
Res. 1532 Lane Oak Rd.
Paducah, 42001
NS 2301 64

Carloss, Harry W.
Barbara
Ofc. 230 Berger Rd.
Paducah, 42001
502-442-8800
Res. 4349 Sunset Ave.
Paducah, 42001
502-442-6097
H 1602 76

Cecil, Jr., John T.
Vicky L.
Ofc. 617 Na. 30th St.
Paducah, 42001
502-443-7534
Res. 225 Kennedy Road
Paducah, 42001
502-442-5938
PD 1602 79

Chaney, Sally H.
Glen S.
Ofc. 2226 Braadway
Paducah, 42001
502-442-9414
Res. 130 Highland
Church Rd.
Paducah, 42001
502-554-2000
OBG 1602 74

Chaney, Glen S.
Sally H.
Ofc. 617 N. 30th St.
Paducah, 42001
502-443-7534
Res. 130 Highland
Church Raad
Paducah, 42001
PD 1602 94

Chumley, Willard F.
Myrna
Ofc. P.O. Bax 7292
Paducah, 42001
502-444-5115
Res. 8 Windsor Waads
Paducah, 42001
R 1602 56

Conrad, Roberta L.
G. England M.D.
Ofc. Western Baptist Hosp.
Paducah, 42001
502-442-5533
Res. 4422 Court Avenue
Paducah, 42001
PATH 1612 76

Cook, Kenneth G.
Darlene
Ofc. 1532 Lone Oak Rd. #4
Paducah, 42001
502-443-2341
Res. 3920 Laura Caurt
Paducah, 42001
FP 1211 77

Crawford, Frank B.
Wice
Ofc. 2421 Braadway
Paducah, 42001
502-442-8272
Res. 3839 Court Ave.
Paducah, 42001
502-443-3303
R 3205 50

MCCRACKEN

Culbertson, Jr., Wm. H.
Constance L.
Ofc. 1920 Broadway
Paducah, 42001
502-442-3647
Res. 3640 Marlboraugh Way
Paducah, 42001
502-443-5058
IM 1602 76

Davies, Theodore E.
Debra
Ofc. P.O. Bax 7206
Paducah, 42001
Res. P.O. Box 7262
Paducah, 42001
NS 1602 71

Davis, Edwin T.
Sylvia
Ofc. 2320 Braadway
Paducah, 42001
502-442-1684
Res. 3801 Pines Road
Paducah, 42001
502-443-1164
PD 2434 56

Davis, Charles K.
Ofc. 2515 Broadway
Paducah, 42001
502-443-8881
Res. 2991 Clay
Paducah, 42001
502-442-7259
SU 4105 64

Devillez, David L.
Ofc. P.O. Box 7709
Paducah, 42001
502-442-8228
Res. P.O. Box 1037
Paducah, 42001
ANES 1320 68

Edds, Sidney P.
Babbie
Ofc. 3594½ Lane Oak Rd.
Paducah, 42001
502-554-7400
Res. Rt. #5, Bax 300
Paducah, 42001
502-554-5847
ANES 4106 51

Embry, James C.
Norma
Ofc. Raute #2
West Paducah, 42086
502-488-3141
Res. 1326 Piedmant Raad
Paducah, 42086
502-442-8541
FP 4106 52

England, Gary T.
Raberta
Ofc. 1701 Kentucky
Paducah, 42001
502-442-5102
Res. 4422 Court
Paducah, 42001
OBG 1612 76

Fort, Darrell L.
Ofc. 2525 Braadway
Paducah, 42001
502-443-8285
Res. 2991 Clay, Apt. 6
Paducah, 42001
502-443-4905
IM 3602 76

Fowler, Merle W.
Kay
Ofc. P.O. Bax 7842
Paducah, 42001
Res. 201 Friedman Lane
Paducah, 42001
SU 1602 43

Franks, Larry C.
Caral
Ofc. P.O. Box 7307
Paducah, 42001
502-442-7181
Res. 1124 Hedge Ln.
Paducah, 42001
502-444-6092
OBG 1320 67

French, Samuel L.
Francis
Ofc. 2138 Broadway
Paducah, 42001
Res. 135 Mimasa Ln.
Paducah, 42001
ORS 1901 43

Gilliam, David T.
Ofc. Suite 415
333 Braadway
Paducah, 42001
502-443-2800
Res. Rt. 12
Bax 270, Westhaven
Paducah, 42001
502-554-0724
P 1602 74

Grogan, Edwin L.
Caralyn
Ofc. 224 Berger Rd.
Paducah, 42001
502-442-9463
Res. 135 Ken Lane
Paducah, 42001
SU 4105 71

Grumley, Paul J.
Juliette
Ofc. 220 Berger Rd.
Paducah, 42001
502-444-9920
Res. 4021 Valley Ln.
Paducah, 42001
502-442-7488
IM 1692 76

Gutierrez, German
Beverly
Ofc. 2218 Kentucky Ave.
Paducah, 42001
502-442-9014
Res. 2218 Kentucky Ave.
Paducah, 42001
P 8402 58

Gwinn, Jr., James S.
Anne
Ofc. P.O. Box 7664
Paducah, 42001
502-442-9478
Res. 3654 Drury Lane
Paducah, 42001
502-442-5999
C 1602 74

Haley, William Burton
Ofc. P.O. Bax 7159
Paducah, 42001
502-442-2491
Res. 630 N. 41st St.
Paducah, 42001
502-443-2666
SU 1602 45

Hall, William P.
Jayne J.
Ofc. P.O. Bax 7525
Paducah, 42001
Res. Rt. #1, Bax 7525
Paducah, 42001
502-554-1476
IM 1602 44

Haugh, Robert M.
Dabney N.
Ofc. 1530 Lone Oak Rd.
Paducah, 42001
606-444-2146
Res. 101 Valley Road
Paducah, 42001
606-442-2163
PATH 1612 77

Hawkins, James M.
Maggie
Ofc. 2003 Kentucky Ave.
Paducah, 42001
502-444-9936
Res. 3627 Marlbaraugh Way
Paducah, 42001
502-442-4742
ENT 301 71

Higdon, Orion Leon
Lucille
Ofc. P.O. Bax 7623
Paducah, 42001
Res. 1140 Rabinwaad Dr. A
Paducah, 42001
502-442-8382
OBG 3113 29

Hogancamp, Glenn E.
Annette
Ofc. 4000 Hale Haven
Apt. A
Paducah, 42001
502-444-4150
Res. 4000 Hale Haven
Apt. A
Paducah, 42001
502-444-6466
EM 1602 61

Hogancamp, Charles E.
Fay
Ofc. 220 Berger Rd.
Paducah, 42001
502-444-9920
Res. 3541 Savay Circle
Paducah, 42001
502-442-2221
IM 2402 53

Hunt, Hilary L.
Mary Lou
Ofc. P.O. Box 7099
Paducah, 42001
502-442-3536
Res. 4325 Sunset
Paducah, 42001
502-442-8315
ORS 2434 58

Hutson, Richard M.
Jane
Ofc. 1532 Lane Oak Rd.
Paducah, 42001
502-442-0683
Res. 15 Margaret Caurt
Paducah, 42001
FP 4105 66

Jaafar, Mohammad Yaser
Ofc. 1920 Braadway
Paducah, 42001
502-442-3647
Res. Medical Arts Bldg.
Paducah, 42001
IM 9101 72

Jackson, William E.
Linda
Ofc. 220 Berger Rd.
Paducah, 42001
502-444-9920
Res. 3525 Marlboraugh Way
Paducah, 42001
502-443-5890
IM 1602 65

Johnson, Walter R.
Jaanne C.
Ofc. 260 Commerce St.
Eddyville, 42038
502-388-7474
Res. Rt. 1
Bend af the Rivers
Kuttawa, 42055
502-388-9424
OBG 2101 46

Johnson, J. Jeff
Suellen
Ofc. 1903 Braadway
Paducah, 42001
502-442-1671
Res. 635 Waadland Dr.
Paducah, 42001
OPH 301 62

Jones, Michael J.
Jan Newhard
Ofc. 224 Berger Rd.
Paducah, 42001
502-442-9463
Res. 201 Waadview Dr.
Paducah, 42001
502-554-8071
SU 1320 73

Kakascik, Gerald E.
Sarah
Ofc. 657 Lane Oak Rd.
Paducah, 42001
502-442-0158
Res. 4351 West Chester Ln.
Paducah, 42001
PS 802 67

MCCRACKEN

Kelley, Ronald L.
Diane
Ofc. Raute #5
Paducah, 42001
502-554-1928
Res. Rt. 5, Bax 325
Paducah, 42001
502-554-0387
P 1602 68

Kim, Andrew T.
Manica
Ofc. 2311 Kentucky Ave.
Paducah, 42001
502-443-8425
Res. 12 Margaret Caurt
Paducah, 42001
502-554-5776
OBG 7604 63

Klemm, Janet E.
Ofc. Anes af Paducah
Bax 7709
Paducah, 42001
502-442-8228
ANES 1320 77

Kolb, III, Frank J.
Jane
Ofc. P.O. Bax 7745
Paducah, 42001
502-442-9461
Res. 3831 Phillips Ave.
Paducah, 42001
502-443-6377
ORS 1602 72

Kraus, John W.
Frances
Ofc. 2525 Braadway
Paducah, 42001
502-443-8285
Res. 3669 Sherwaad Dr.
Paducah, 42001
GE 3106 72

Kupper, Ronald M.
Dawn
Ofc. 220 Lane Oak Rd.
Paducah, 42001
502-442-3539
Res. 3966 Alben
Barkley Dr.
Paducah, 42001
502-554-7537
U 1612 69

Magruder, Margaret B.
Samuel R.
Ofc. 270 Cedar Ln.
Paducah, 42001
Res. 270 Cedar Lane
Paducah, 42001
502-442-9883
PATH 2007 44

Manchikanti, Laxmaiah
Chandrakala
Ofc. 1530 Lane Oak Rd.
Paducah, 42001
502-444-2172
Res. 523 Drawbridge Tr.
Paducah, 42001
502-898-8187
ANES

McCracken, John E.
Janet
Ofc. 2003 Kentucky Ave.
Paducah, 42001
502-444-9936
Res. 108 S. Sycamare
Paducah, 42001
502-442-9167
OTO 1602 71

McMillan, Gary L.
Lupe
Ofc. 2315 Braadway
Paducah, 42001
502-443-2471
Res. 135 Vine St.
Paducah, 42001
502-442-4530
D 4701 68

Meriwether, Robert P.
Gloria M.
Ofc. 2400 Braadway
Paducah, 42001
502-442-5100
Res. 4511 Wellingbarough
Paducah, 42001
502-554-8758
NS 1701 73

Miller, Robert B.
Glenda
Ofc. P.O. Bax 7099
Paducah, 42001
502-442-1638
Res. 201 Old Orchard Rd.
Paducah, 42001
502-443-3921
ORS 4105 56

Montgomery, Wally O.
Geraldine
Ofc. P.O. Bax 7329
Paducah, 42001
502-443-5371
Res. 3690 Marlbarough Way
Paducah, 42001
502-443-4119
SU 1602 62

Morehead, Charles D.
Sue
Ofc. P.O. Bax 7099
Paducah, 42001
Res. Rt. 8, Bax 92-C
Paducah, 42001
502-554-7979
ORS 1211 64

Mutchler, Bradford E.
Ofc. P.O. Bax 7461
W. Bapt. Hasp.
Paducah, 42001
502-444-5180
Res. 125 Oakview Circle
Paducah, 42001
EM 4106 62

Myers, Jr., Roland H.
Ofc. 1903 Broadway
Paducah, 42001
Res. 3620 Marlbarough Way
Paducah, 42001
OPH 4106 71

Myre, Louis D.
Jane
Ofc. 2616 Braadway
Paducah, 42001
502-443-3679
Res. 4005 Pines Raad
Paducah, 42001
502-443-5934
IM 1206 52

Myre, Theodore T.
Carol
Ofc. P.O. Bax 7329
Paducah, 42001
Res. 752 Friedman Ln.
Paducah, 42001
TS 1206 48

Noonan, John D.
Jayce
Ofc. P.O. Bax 7206
Paducah, 42001
502-443-6472
Res. Rt. 2, Bax 132
Kevil, 42060
502-443-5011
NS 1602 63

Noss, Glenn R.
Nancy
Ofc. Raute 2
West Paducah, 42086
502-488-3141
Res. 1126 Sherwaad Avenue
Paducah, 42001
502-443-6939
FP 4106 53

Orr, C. Pittman
Eugenie
Ofc. 100 Ridgewaad Ave.
Paducah, 42001
Res. 100 Ridgewaad Ave.
Paducah, 42001
IM 1206 45

Parrott, Norman A.
Ofc. 2315 Braadway
Paducah, 42001
502-443-2471
Res. 2315 Braadway
Paducah, 42001
502-442-4789
D 1602 48

Petway, Willard J.
Ofc. 1901 Kentucky Ave.
Paducah, 42001
502-442-3559
Res. 1901 Kentucky Ave.
Paducah, 42001
IM 1602 44

Price, Paul H.
Jean
Ofc. 2311 Kentucky Ave.
Paducah, 42001
502-443-8425
Res. Route 11, Box 83A
Paducah, 42001
502-554-3867
OBG 4701 64

Roberts, Lowell F.
Rayna
Ofc. P.O. Box 7664
Paducah, 42001
502-442-9478
Res. 3663 Sherwaod Rd.
Paducah, 42001
502-444-6646
C 1602 64

Robertson, Robert W.
Dawne
Ofc. 2501 Kentucky Ave.
Paducah, 42001
Res. 636 N. 36th St.
Paducah, 42001
SU 1243 31

Ross, Luke D.
Judith
Ofc. 220 Berger Rd.
Paducah, 42001
502-444-9920
Res. 3521 Savoy Circle
Paducah, 42001
502-443-5098
IM 1612 77

Roush, James R.
Ofc. 1530 Lone Oak
Paducah, 42001
502-444-2145
Res. 140 Gatewaad Drive
Paducah, 42001
502-554-3064
PATH 1320 70

Rucker, Richard H.
Mary L.
Ofc. P.O. Bax 1410
Paducah, 42001
502-444-6311
Res. P.O. Box 1410
Paducah, 42001
502-443-4881
OM 4106 47

Sargent, Holmes G.
Reba M.
Ofc. 206 Irquais Dr.
Paducah, 42001
Res. Bax 206
Paducah, 42001
502-554-4401
PH 1602 46

Seabury, Jr., James C.
Sallie
Ofc. 220 Lane Oak Rd.
Paducah, 42001
502-442-3539
Res. 215 Valley Raad
Paducah, 42001
502-443-5276
U 3207 60

Shemwell, Frank A.
Ofc. P.O. Bax 7741
Paducah, 42001
Res. 4200 Buckner Lane
Paducah, 42001
SU 4105 48

Shidal, William D.
Rhetta
Ofc. 617 Na. 30th St.
Paducah, 42001
502-443-7534
Res. 1255 High St.
Paducah, 42001
502-442-4931
PD 1602 53

Shields, Charles L.
Linda
Ofc. P.O. Box 7329
Paducah, 42001
502-443-5371
Res. Raute 6, Box 563A
Paducah, 42001
502-554-3300
SU 1602 69

Shumaker, James L.
Camilla
Ofc. 2204 Kentucky Ave.
Paducah, 42001
502-442-6161
Res. 2204 Kentucky Ave.
Paducah, 42001
502-442-7028
PD 1320 60

Sloan, Warren E.
Pug
Ofc. 2320 Braadway
Paducah, 42001
502-443-4581
Res. 1213 Allen Ln.
Paducah, 42001
502-443-4551
IM 1602 44

Smith, Richard D.
Leigh
Ofc. 1901 Kentucky Ave.
Paducah, 42001
502-442-3559
Res. 1924 Jefferson
Paducah, 42001
IM 4204 73

Smith, Irvin E.
Cannie
Ofc. Anes. af Paducah
P.O. Box 7709
Paducah, 42001
502-442-8228
Res. 400 Palisades Circle
Paducah, 42001
ANES 1602 78

Spaulding, Joe B.
Dat
Ofc. 3035 Clay St.
Paducah, 42001
502-442-5611
Res. 119 Mimasa Lane
Paducah, 42001
502-442-4357
OBG 4106 43

Stodghill, William J.
June
Ofc. P.O. Box 7745
Paducah, 42001
502-442-9461
Res. 1175 Sherwoad Dr.
Paducah, 42001
502-442-5514
ORS 1602 68

Stryker, Winfield
Betty
Ofc. 201 Medical Arts Bldg.
Paducah, 42001
502-443-6264
Res. 3930 Buckner Ln.
Paducah, 42001
502-443-1566
PD 3103 47

Sullivan, Clarence F.
Clara
Ofc. P.O. Box 7347
Paducah, 42001
502-442-4432
Res. 239 Old Orchard Rd.
Paducah, 42001
502-442-2429
IM 1602 51

Taylor, Ben H.
Donna
Ofc. Western Baptist Hasp.
Paducah, 42001
502-444-5515
Res. 4147 Rustic Ave.
Paducah, 42001
502-443-2918
PATH 1602 72

Thomas, David P.
Anita M.
Ofc. P.O. Box 7099
Paducah, 42001
Res. 521 Zarn Ave.
Lauisville, 40206
502-443-7255
ORS 3441 65

Vanderboegh, Brian W.
Ofc. 1530 Lone Oak Rd.
Paducah, 42001
502-444-2150
Res. 5203 Ogilvie
Paducah, 42001
502-554-7680
EM 1602 77

Wallace, Jesse
Kathy
Ofc. 1901 Kentucky Ave.
Paducah, 42001
502-442-3559
Res. 2605 Jefferson
Paducah, 42001
IM 4204 74

Washburn, Burton A.
Mildred
Ofc. P.O. Box 7006
Paducah, 42001
502-443-5354
Res. 4338 Caurt Avenue
Paducah, 42001
SU 1602 36

Wheeler, II, William G.
Teresa A.
Ofc. P.O. Bax 7329
Paducah, 42001
502-443-5371
Res. Raute 12
Box 149
Paducah, 42001
502-554-0492
SU 4204 74

Wiggins, Joseph D.
Lari F.
Ofc. 657 Lane Oak Rd.
Suite 6
Paducah, 42001
502-444-0410
Res. 4371 Westchester Lane
Paducah, 42001
502-554-0493
FP 1602 79

Withrow, Patrick J.
Mary Sue
Ofc. P.O. Box 7664
Paducah, 42001
502-442-9478
Res. 201 Maxfield Dr.
Paducah, 42001
502-442-7239
C 1602 76

Wooldridge, Robert M.
Patsy
Ofc. P.O. Bax 648
Paducah, 42001
502-442-8045
Res. 4300 Pines Raad
Paducah, 42001
502-442-8045
ANES 1602 49

Ylitalo, Elmer W.
Faye
Ofc. 2501 Kentucky Ave.
Paducah, 42001
502-444-5508
Res. Box 322, RR 5
Paducah, 42001
502-554-4768
PATH 2204 59

MCCREARY

Burgess, Jerald M.
Janie
Ofc. Box 220
Whitley City, 42653
606-376-5391
Res. Whitley City, 42653
606-376-2711
FP 1612 74

Patton, John A.
Debarah
Ofc. Box 189
Whitley City, 42653
606-376-5391
Res. P.O. Bax 189
Whitley City, 42653
606-354-2617
FP 1602 74

Winchester, Merrill A.
Portia
Ofc. Box 220
Whitley City, 42653
606-376-5391
Res. Box 220
Whitley City, 42653
606-376-5377
FP 1602 58

MEADE

Gauld, John R.
Ruth M.
Ofc. RR 1, Box 42
Brandenburg, 40108
502-422-4610
Res. RR 1, Box 42
Brandenburg, 40108
502-422-4610
PH 1901 55

Hardaway, Julian R.
Ofc. P.O. Box 276
Brandenburg, 40108
606-236-5436
Res. 462 Boane Trail
Danville, 40422
606-236-5436
FP 1602 49

MERCER

Ballard, Ralph T.
Ann N.
Ofc. 587 Chestnut St.
Harrodsburg, 40330
606-734-2311
Res. Old Danville Rd.
Harradsburg, 40330
606-734-4402
GP 1602 61

Baughman, III, John S.
JaAnne
Ofc. 118 W. Paplar St.
Harradsburg, 40330
606-734-5429
Res. 504 Beaumant
Harrodsburg, 40330
606-734-4267
FP 1602 59

Beine, Kathleen L.B.
Rabert Beine
Ofc. 470 Linden Ave.
Harradsburg, 40330
606-734-5788
Res. Rt. 1
Salvisa, 40308
FP

Dedman, Thomas C.
Betty
Ofc. Suite #1
470 Linden Ave.
Harradsburg, 40330
606-734-5126
Res. 470 Linden Ave.
Harradsburg, 40330
606-734-5126
SU 1602 69

Keightley, James M.
Margaret C.
Ofc. 124 E. Office St.
Harradsburg, 40330
606-734-4307
Res. Wildwaad
Harradsburg, 40330
606-748-9062
GP 1602 47

Moore, III, Bacon R.
Poulo W.
Ofc. 124 E. Office St.
Horrodsburg, 40330
606-734-4307
Res. Donville Road
Horrodsburg, 40330
606-734-3304
FP 1602 56

Noe, George W.
Corole S.
Ofc. 470 Linden Ave.
Horrodsburg, 40330
606-734-5152
Res. Rt. 2
Perryville Rood
Horrodsburg, 40330
606-734-6201
IM 1602 77

Powell, Glenn R.
Betty
Ofc. Route 4
Horrodsburg, 40330
Res. Rt. 4
Horrodsburg, 40330
606-748-9160
GP 1602 55

Riker, William L.
Ofc. 536 Lexington St.
Horrodsburg, 40330
Res. 536 Lexington St.
Horrodsburg, 40330
SU 2001 39

Sewell, Jr., Frank K.
Joon
Ofc. Imperiol Bldg.
110 3rd St.
Henderson, 42420
502-826-8324
Res. Apt. 166, Chopel Drive
Henderson, 42420
502-826-3621
SU 3207 63

Van Arsdall, Jr., C. B.
Moi F.
Ofc. 712 Beoumont Ave.
Horrodsburg, 40330
Res. 712 Beoumont Avenue
Horrodsburg, 40330
GP 3207 37

Van Arsdall, Sr., T. C.
Sylvio B.
Ofc. 786 Beoumont Ave.
Horrodsburg, 40330
606-233-4511
Res. 786 Beaumont Avenue
Horrodsburg, 40330
606-734-3871
GP 3207 43

Whalen, Jr., Frank
Lindo
Ofc. 124 E. Office St.
Horrodsburg, 40330
606-734-4307
Res. Lexington Rood
Horrodsburg, 40330
606-734-9896
GP 1602 65

METCALFE

Emberton, Lawrence P.
Ofc. 19 Stockton Ct.
Edmonton, 42129
502-432-3461
Res. Edmonton, 42129
502-432-3481
GP 3901 48

Hogan, E. Gary
Fredo
Ofc. P.O. Box 799
Glosgow, 42141
502-651-9126
Res. P.O. Box 573
Glosgow, 42141
502-622-4908
FP 1602 74

MONROE

Bushong, William R.
A. Sue
Ofc. 200 Crowford
Tompkinsville, 42167
502-487-6146
Res. 409 Lake St.
Tompkinsville, 42167
502-487-5592
FP 1602 51

Carter, James E.
Judith B.
Ofc. 805 N. Moin St.
Tompkinsville, 42167
502-487-6121
Res. 805 N. Moin
Tompkinsville, 42167
502-487-5567
GP 1602 57

Carter, Tim Lee
Kothleen B.
Ofc. 805 N. Moin St.
Tompkinsville, 42167
502-487-8696
Res. 502-487-5173
GP 4106 37

Crabtree, Kenneth R.
Shirley A.
Ofc. P.O. Box 98
Gomoliel, 42140
502-457-2411
Res. 701 North Moin St.
Gamoliel, 42140
502-457-3911
FP 4106 63

MONTGOMERY

Burton, Jay Mike
Lindo
Ofc. 250 Foxglove Dr.
Mt. Sterling, 40353
606-498-6747
Res. R. R. 4, Box 401
Mt. Sterling, 40353
606-498-6776
SU 1612 73

Eastham, Mary L.
Ofc. 250 Foxglove
Mt. Sterling, 40353
606-498-6484
Res. Rt. 4, Collins Est.
Mt. Sterling, 40353
606-498-9500
OBG 1621 76

Edmundson, David P.
Fronces
Ofc. P.O. Box 295
Mt. Sterling, 40353
Res. 8 White Avenue
Mt. Sterling, 40353
606-498-2043
GP 4106 36

Kash, Roy M.
Ello
Ofc. P.O. Box 448
Mt. Sterling, 40353
606-498-5720
Res. 414 N. Moysville
Mt. Sterling, 40353
606-498-2680
OPH 3207 43

McFadden, Don C.
Ofc. 29 North Moysville St.
Mt. Sterling, 40353
Res. 410 Wyondot Woy
Mt. Sterling, 40353
FP 3207 62

McKenna, William H.
Ofc. Sterling & Bigstoff Ct.
Mt. Sterling, 40353
FP 1602 51

Roberts, Jr., Lon E.
Ellen G.
Ofc. 250 Foxglove Dr.
Suite #7
Mt. Sterling, 40353
606-498-0200
Res. 406 N. Sycomore St.
Mt. Sterling, 40353
606-498-2713
IM 1612 76

Salisbury, Robert J.
Soroh
Ofc. Cove Run Clin.
112 W. High
Mt. Sterling, 40353
606-498-5151
Res. Wyondot Woy
Mt. Sterling, 40353
606-498-3957
FP 1602 53

Sewell, Sr., Frank K.
Cormie
Ofc. P.O. Box 428
Mt. Sterling, 40353
606-498-0880
Res. 303 N. Sycomore
Mt. Sterling, 40353
606-498-1968
FP 4105 33

Spires, Stephen M.
Suson
Ofc. 112 W. High
Mt. Sterling, 40353
606-498-5151
Res. 602 Brookview Drive
Mt. Sterling, 40353
606-498-6651
U 1612 72

Tackett, Laddie L.
Chorlene G.
Ofc. P.O. Box 3369
Pikeville, 41501
606-498-6747
Res. Rt. 4
152 Collins Estotes
Mt. Sterling, 40353
606-498-9478
SU 1612 77

MORGAN

Bellamy, George R.
Bette
Ofc. No. Moin St.
West Liberty, 41472
606-743-4124
Res. P.O. Box 308
West Liberty, 41472
606-743-3284
GP 1602 57

Cordero, Jose M.
Joyce Juon
Ofc. Appolochion Regionol
Hosp.
McDowell, 41647
606-377-2411
Res. P.O. Box 382
West Liberty, 41472
606-743-4318
R 7901 59

Frederick, James D.
Ginni
Ofc. Morgon Co.
Appolochion Hosp.
West Liberty, 41472
Res. West Liberty, 41472
606-743-7380
FP 1602 72

Peyton, Morris L.
Fronces S.
Ofc. Appalochion Regionol
Hosp.
West Liberty, 41472
606-743-3198
Res. West Liberty, 41472
606-743-4319
GP 1602 56

Spencer, Alec
Charleen
Ofc. West Liberty, 41472
Res. West Liberty, 41472
606-743-3165
GP 1602 40

Stamper, William J.
Goyle
Ofc. Rt. 1, Box 30
West Liberty, 41472
606-743-3198
Res. Rt. 1, Box 30
West Liberty, 41472
606-743-7375
FP 1612 75

MARSHALL

Bradford, William R.
Corol B.
Ofc. 250 Foxglove Dr.
Mt. Sterling, 40353
502-527-9311
Res. Rt. 7, Box 90
Benton, 42025
502-527-9311
SU 1701 77

Chandler, John D.
Anita L.
Ofc. P.O. Box 227
Benton, 42025
502-527-8157
Res. P.O. Box 227
Benton, 42025
502-362-4972
R 1701 53

Colburn, William J.
Mary I.
Ofc. Calvert City Clinic
Calvert City, 42029
502-395-4242
Res. 9th at Every Greer
Calvert City, 42029
502-395-4243
GP 1602 52

Colburn, William R.
MaLinda K.
Ofc. Calvert City Clinic
Calvert City, 42029
502-395-4242
Res. 853 Elm St.
Calvert City, 42024
502-395-7085
GP 1602 75

Ellis, Keith E.
Sue
Ofc. 500 E. 9th St.
Benton, 42025
502-527-8601
Res. Route 8
Merrywood
Benton, 42025
502-527-3846
FP 1602 62

Ford, H. W.
Beverly
Ofc. 500 E. 9th St.
Benton, 42025
502-527-8601
Res. 500 East 9th Street
Benton, 42025
502-527-7486
FP 1602 62

Gordon, Wendell E.
JoAnn
Ofc. Ninth & Poplar St.
Benton, 42025
502-527-8331
Res. Route #8
Benton, 42025
502-527-8551
GP 4106 59

King, Harold L.
Eris Brown
Ofc. 500 E. 9th St.
Benton, 42025
Res. 500 E. 9th St.
Benton, 42025
502-527-3791
GP 4106 51

Miller, Joseph R.
Juanita
Ofc. 1402 Poplar St.
Benton, 42025
502-527-3333
Res. 1402 Poplar St.
Benton, 42025
502-527-3333
GP 1602 42

Schaper, Paul W.
Evangeline
Ofc. 500 E. 9th St.
Benton, 42025
502-527-9311
Res. 500 East 9th
Benton, 42025
502-527-3553
SU 2403 59

Traylor, Carroll W.
Jackie
Ofc. 1447 Fifth Ave.
Calvert City, 42029
502-395-4224
Res. Calvert City, 42029
502-395-4226
GP 1005 54

MARION

Baute, Bernard J.
Kathryn
Ofc. 214 S. Proctor Knott
Lebanon, 40033
502-692-3159
Res. 214 S. Proctor Knott
Lebanon, 40033
502-692-2616
GP 3709 29

Bowling, Edward C.
Jenny
Ofc. 310 W. High St.
Lebanon, 40033
502-692-6545
Res. 513 Park Dr.
Lebanon, 40033
502-692-2682
SU 1602 52

Eastridge, Robert D.
Sue
Ofc. 214 S. Proctor
Knott Ave.
Lebanon, 40033
502-692-3159
Res. Jo Ann Court
Lebanon, 40033
502-692-2631
SU 4106 44

George, Eli J.
Ofc. 365 N. Spalding Ave.
Lebanon, 40033
Res. 101 W. Main St.
Lebanon, 40033
FP 1602 43

George, Salem M.
Eva
Ofc. 129 West Chandler St.
Lebanon, 40033
502-692-4844
Res. Country Club Dr.
Lebanon, 40033
502-692-3101
FP 1602 59

Ratliff, John W.
Amelia
Ofc. High St.
Lebanon, 40033
502-692-3123
Res. 404 St. Rose Rd.
Lebanon, 40033
502-692-4138
FP 1602 53

Salot, Duncan G.
Beatrice
Ofc. 502 Forest Ave.
Campbellsville, 42718
502-465-7347
Res. 502 Forest Avenue
Campbellsville, 42718
502-465-7347
OPH 2107 28

Scott, Brian F.
Lorraine
Ofc. 101 W. Main St.
Lebanon, 40033
502-692-2145
Res. Country View Dr.
Lebanon, 40033
FP 5909 79

Steele, A. Arthur
Mary Anne
Ofc. St. Mary's Rd.
Lebanon, 40033
502-692-9559
Res. Lavit Lane
Lebanon, 40033
502-692-9572
IM 1901 71

Wilber, Robert H.
Margaret
Ofc. 146 E. Main St.
Lebanon, 40033
502-692-2151
Res. Route 3
Lebanon, 40033
502-692-3003
FP 1602 58

MARTIN

Wells, Raymond D.
Carole
Ofc. Doctors Bldg.
Inez, 41224
606-298-3412
Res. P.O. Box 1088
Inez, 41224
606-298-3254
FP 1612 65

MUHLENBERG

Armstrong, Aubrey L.
Jackie K.
Ofc. Greenville Clinic
Greenville, 42345
502-338-2211
Res. Rolling Hills
Greenville, 42345
502-338-5012
SU 1612 73

Beard, George S.
Barbara Ann
Ofc. P.O. Box 387
Greenville, 42345
502-886-0125
Res. 1017 Great Oaks Drive
Hopkinsville, 42240
502-885-6656
EM 1602 56

Boggess, Joseph R.
Katie
Ofc. P.O. Box 321
Greenville, 42345
502-338-5580
Res. P.O. Box 368
Greenville, 42345
502-338-5645
GP 1602 64

Brashear, James S.
Catherine T.
Ofc. Medical Bldg. Legion Dr.
Central City, 42330
502-754-3880
Res. P.O. Box 635
Central City, 42330
502-754-3488
GP 1602 61

Daud, Mian B.
Shahhaz K.
Ofc. 144 North Main St.
Greenville, 42345
Res. 144 N. Main St.
Greenville, 42345
502-338-4512
PD 5088 71

Daud, Shahnaz K.
Mian B. Daud
Ofc. Muhlenburg Comm. Hosp.
Greenville, 42345
502-338-9564
Res. Muhlenburg Comm. Hosp.
Greenville, 42345
502-338-4512
OBG 5088 73

Diaz, Ronilo D.
Mary
Ofc. Greenville Clinic
Greenville, 42345
502-338-2211
Res. Rolling Hills
Greenville, 42345
502-338-5792
SU 8507 63

Givens, Gary D.
Lana Jane
Ofc. Medical Bldg.
Central City, 42330
502-754-1868
Res. 523 Walnut
Central City, 42330
502-754-2421
IM 4106 65

Grimes, David L.
Amy
Ofc. 107 Court Row
Greenville, 42345
502-338-4611
Res. Rt 2, Box 47
Old Russelville Rd.
Greenville, 42345
502-338-6712
OBG 1612 74

Hamon, Allen J.
Letitio Ann
Ofc. So. Broodwoy
Corlisle, 40311
Res. South Broadwoy
Corlisle, 40311
606-289-5536
GP 1612 68

Hicks, Brooks G.
Alice
Ofc. 550 Hopkinsville St.
Greenville, 42345
502-338-4211
Res. 101 Borlow Ploce
Greenville, 42346
502-338-5354
R 1612 69

Jugo, Slobodan B.
Lidija
Ofc. 211 South Cherry St.
Greenville, 42345
502-338-6650
Res. 428 Ookview Drive
Greenville, 42345
502-338-4478
OTO 9601 71

Keith, Willard L.
Rebecca H.
Ofc. 10 Down Dr.
Greenville, 42345
502-338-6507
Res. 10 Down Drive
Greenville, 42345
502-338-0875
EM 1612 74

Kingsolver, Wendell R.
Virginia N.
Ofc. Locust & Chestnut St.
Carlisle, 40311
606-289-2283
Res. Locust & Chestnut Sts.
Corlisle, 40311
606-289-5401
FP 2101 52

McGhee, William R.
Veronico Ann
Ofc. Greenville Medical Clinic
Greenville, 42345
502-338-3660
Res. Rt. #2
Greenville, 42345
502-338-0542
IM 1612 75

Miller, William L.
Hildo Foe
Ofc. Muhlenburg Comm. Hosp.
Greenville, 42345
502-338-4211
Res. Rt. 2, Box 32 A
Morgantown, 42261
502-526-5780
PATH

Morford, Jack T.
Ofc. 110 Broadwoy St.
Carlisle, 40311
606-289-5454
Res. Corlisle, 40311
606-289-5382
GP 1602 45

Rodman, George H.
Frances
Ofc. So. Cherry St.
Greenville, 42345
502-338-2211
Res. Box 351
Greenville, 42345
502-338-2238
SU 2434 40

Scott, Timothy R.
Lindo G.
Res. Rt. 1, Cliffwoy Drive
Corlisle, 40311
606-289-2568
FP 1612 79

Shipp, Charles J.
Billie Jeon
Ofc. Greenville Clinic
Greenville, 42345
502-338-5780
Res. 321 E. Moin Cross
Greenville, 42345
502-338-1967
FP 1602 53

Shuttleworth, William E.
Ofc. 101 Legion Dr.
Centrol City, 42330
502-754-1868
Res. UKMC Surgery
Lexington, 40536
502-338-2518
SU 1612 73

Simpao, Valentino S.
Ofc. Legion Dr.
Centrol City, 42330
502-754-5310
Res. Centrol City, 42330
GP 5088 57

Simpson, Gaithel L.
Ofc. South Cherry St.
Greenville, 42345
Res. 103 Maple Dr.
Greenville, 42345

Stokes, Joseph D.
Ann K.
Ofc. Box 386
Greenville, 42345
502-338-9309
Res. 227 Twin Hill
Greenville, 42345
502-338-1909
R 1602 57

Villaflor, Osias M.
Virginio
Ofc. 138 S. Broodwoy
Carlisle, 40311
606-289-2651
Res. 117 Sycomore Hill
Corlisle, 40311
606-289-5131
SU 8507 57

Woodson, Jr., Hylan H.
Dorothy R.
Ofc. P.O. Box 230
Greenville, 42345
502-338-2456
Res. Box 230
Greenville, 42345
502-338-3501
FP 1602 45

NELSON

Brown, Charles M.
Mory Sue
Ofc. 201 South 5th St.
Bordstown, 40004
502-348-9038
Res. 2900 Virginia
Bordstown, 40004
502-348-2670
IM 2434 68

Cecil, Fredrick J.
Leno
Ofc. 201 So. 5th St.
Bordstown, 40004
502-348-2731
Res. P.O. Box 246
Bardstown, 40004
502-252-8354
SU 1602 54

Gossman, M. Douglas
Jon D.
Ofc. 120 W. Stephen Foster
St. 105
Bordstown, 40004
502-348-0571
Res. 3137 Yorkshire
Bordstown, 40004
502-348-8044
OPH 3106 76

Hedrick, James A.
Sue
Ofc. 201 So. 5th St.
Bordstown, 40004
502-348-6309
Res. 201 S. Fifth
Bordstown, 40004
502-348-2434
PD 1211 74

Hendren, Robert D.
Betty
Ofc. P.O. Box 308
Bloomfield, 40008
502-252-5081
Res. Bloomfield, 40008
502-252-8138
FP 1602 71

Hess, Michael C.
Sherry
Ofc. 201 So. 5th St.
Bardstown, 40004
502-348-5968
Res. 201 South 5th Street
Bordstown, 40004
FP 1602 76

Lockett, Fredericka C.
Philip
Ofc. P.O. Box 308
Bloomfield, 40008
502-252-5081
Res. Perry St.
Bloomfield, 40008
502-252-5654
IM 1612 75

Sonne, John J.
Ofc. Box 494
Bordstown, 40004
Res. Box 494
Bordstown, 40004
502-348-3349
SU 1602 42

Spalding, Charles B.
Chris
Ofc. 201 So. Fifth St.
Bordstown, 40004
502-348-5968
Res. 107 Hilcrest Ave.
Bordstown, 40004
502-348-3085
FP 1602 53

Spalding, Henry S.
Borboro H.
Ofc. 201 So. Fifth St.
Bordstown, 40004
502-348-5968
Res. Edgewoode
Bordstown, 40004
502-348-8178
FP 1602 57

Stinnette, Kenneth L.
Jeon D.
Ofc. 201 So. Fifth St.
Bordstown, 40004
502-348-3966
Res. West Wind Troil
Bordstown, 40004
502-348-8012
FP 1602 45

Weddle, Ronald D.
Lindo
Ofc. 201 So. Fifth St.
Bordstown, 40004
502-348-5968
Res. 4002 Mory Jo Blvd.
Bordstown, 40004
502-348-3692
FP 1612 73

Wood, Emmett W.
Joon L.
Ofc. 607 No. Third St.
Bordstown, 40004
502-348-5927
Res. Hillcrest Dr.
Bordstown, 40004
502-348-5447
FP 4106 59

OHIO

Allen, Billy R.
Deloris K.
Ofc. Rt. 2
Hartford, 42347
Res. Iron Mountoin Estotes
Hartford, 42347
502-298-7381
FP 1612 65

Bennett, Durrett C.
Potricio
Ofc. P.O. Box 228
Beover Dom, 42320
502-274-3326
Res. Hwy. 231, North
Beaver Dom, 42320
502-274-3386
GP 1602 52

Chung, E. Pyo
Janet
Ofc. Medical Ctr.
Hartford, 42347
502-298-3356
Res. Iron Mt. Estates
Hartford, 42347
502-298-7610
SU 7605 57

Gross, Dorothea H.
John
Ofc. P.O. Bax 193
Fardsville, 42343
502-276-3647
Res. P.O. Bax 126
Fordsville, 42343
502-276-5526
PD 9002 50

Johnson, Robert T.
Betty H.
Ofc. 312 E. Main
Hartford, 42347
502-798-3994
Res. Hartford, 42347
502-298-3076
FP 1602 63

Lauw-Wong, Khing T.
Ofc. 312 B. Main St.
Hartford, 42347
502-298-7641
Res. Route 3
Iron Mountain Estate
Hartford, 42347
502-298-9745
OBG 5088 74

Moroz, Matthew A.
Judy
Ofc. 530 Griffith Ave.
Owensbora, 42301
Res. 530 Griffith Ave.
Owensbaro, 42301
EM 2005 39

Norsworthy, Robert E.
Ofc. Box 127
Hartford, 42347
Res. 112 McMurtry Street
Hartford, 42347
502-298-3364
FP 1602 55

Norsworthy, Eric A.
M. Gwen
Ofc. P.O. Bax 5
Hartford, 42347
502-298-9200
Res. P.O. Bax 5
Hartford, 42347
502-298-3364
FP

Price, Charles L.
Shirlye J.
Ofc. McMurtry St.
Hartford, 42347
502-298-3229
Res. Route #1
Hartford, 42347
502-298-3157
FP 1602 56

OLDHAM

Funke, Harold F.
Lauise
Ofc. 6461 West Hwy. 146
Crestwaod, 40014
502-241-8418
Res. 212 Elm St.
PeWee Valley, 40056
502-241-4631
FP 1602 46

Houchin, Edward G.
Beverly
Ofc. 205 Narth Third St.
LaGrange, 40031
502-222-1481
Res. Bax 12
LaGrange, 40031
502-222-1041
FP 1602 46

Leland, John H.
Flareen
Ofc. Bax 38
Crestwoad, 40014
502-241-8488
Res. 6716 W. Hwy. 329
Crestwaad, 40014
502-241-9127
FP 412 53

OWEN

Adair, Norman
Martha
Ofc. 40 Ashtan Rd.
Ft. Mitchell, 41017
606-431-8198
Res. P.O. Bax 204
Cavington, 41012
606-331-1975
R 1602 41

Bowling, Maurice
Gladys B.
Ofc. 114 Na. Madison
Owenton, 40359
502-484-2300
Res. 114 Narth Madisan
Owentan, 40359
502-484-3484
GP 1602 52

Cull, O. Abbett
Ofc. 101 No. Thomas St.
Owenton, 40359
Res. Bax 496
Owentan, 40359
GP 1602 50

Soliman, Jr., Patricio F.
Celestina C.
Ofc. Owen Caunty Mem. Hasp.
Owentan, 40359
502-484-5743
Res. Route 6, Bax 234
Owenton, 40359
502-484-2508
GP 8507 56

OWSLEY

Gabbard, Mildred B.
Ofc. P.O. Bax 128
Baaneville, 41314
Res. Baaneville, 41314
606-593-5096
PH 1602 34

PERRY

Boggs, Eli C.
Margaret C.
Ofc. Begley Bldg.
271 E. Main
Hazard, 41701
606-439-2364
Res. 133 Parkway
Hazard, 41701
606-436-3462
FP 2015 42

Chan, Shiu-Kee
Ann Chan
Ofc. Appalachian Reg. Hasp.
Pathalagy
Hazard, 41701
606-439-1331
Res. 400 Sun Valley Terrace
Hazard, 41701
PATH 6101 59

Chaney, George R.
Ofc. 232 Turner Ave.
Hazard, 41701
606-439-4543
Res. 232 Turner Avenue
Hazard, 41701
606-439-4792
FP 1602 81

Combs, Lyndon F.
Blanche
Ofc. 232 Eversole St.
Hazard, 41701
606-436-3573
Res. 232 Eversale St.
Hazard, 41701
606-436-3573
GP 1602 34

Cowan, Jr., Walter E.
Ofc. P.O. Box 1556
Hazard, 41701
606-436-5761
Res. P.O. Bax 1556
Hazard, 41701
606-439-4654
P 1602 69

Gilbert, Jr., John F.
Ofc. 271 E. Main St.
Hazard, 41701
606-436-2109
Res. 271 E. Main
Hazard, 41701
FP 1602 63

Goli, Venkateswara R.
Hemalata Gali
Ofc. 271 E. Main St.
Hazard, 41701
606-439-3334
Res. 120 Oak Street
Hazard, 41701
606-439-1748
U 7002 74

Jagdale, Balkrishan T.
S. Balkrishna
Ofc. 271 E. Main St.
Hazard, 41701
606-439-4460
Res. 271 East Main Street
Hazard, 41701
606-439-4693
ORS 7013 57

John, Becky L.
Cullen W. Ray
Ofc. Physicians Bldg.
Hazard, 41701
606-436-2569
Res. P.O. Box 926
Hazard, 41701
606-439-1987
GP 1602 65

Lambert, Jr., Herman J.
Ofc. Appalachian Reg. Hosp.
Hazard, 41701
606-439-1319
Res. RR 3, Bax 597-3
Hazard, 41701
606-439-2898
OBG 1901 49

Mahalingashetty, P.B.
Ofc. 609 Main St.
P.O. 29
Hazard, 41701
Res. Hazard, 41701
SU 7020 74

Mangla, Lal C.
Sunita Mangla
Ofc. P.O. Bax 977
Murray, 42071
502-753-5131
Res. 2100 Braakhaven Drive
Murray, 42071
502-759-9782
ANES 7014 67

McIntyre, Deborah L.
Ofc. 271 E. Main St.
Hazard, 41701
606-439-2490
Res. 420 Baker Avenue
Hazard, 41701
606-436-3374
SU 1602 74

Nayak, Irvathur N.
Kanaka
Ofc. P.O. Bax 29
609 Main St.
Hazard, 41701
606-439-3636
Res. 609 Main St.
Hazard, 41701
606-439-3822
SU 7034 63

Patel, Ashokkumar R.
Meena
Ofc. ARH Diagnastic Radiology
Hazard, 41701
606-439-5057
Res. 100 Garman Ridge
Hazard, 41701
606-439-5057
R 7003 74

Pigman, Alger B.
Ofc. Bax 190
Vicco, 41773
606-476-2520
Res. 601 Oakhurst Avenue
Hazard, 41701
606-436-3674
GP 1602 32

Pratt, Mary L.
Ofc. Appalachian Regional Hasp
Hazard, 41701
606-439-1319
Res. 341 Riverview Drive
Hazard, 41701
OBG 3709 60

Reddy, Syamala H. K.
Samyuktha
Ofc. ARH-Ophthalmalagy
Hazard, 41701
606-439-4767
Res. 252 Highland Ave.
Hazard, 41701
606-439-4717
OPH 7002 71

Rutledge, Charles C.
Ofc. Hazard Clinic
Hazard 41701
Res. Hazard, 41701
SU 1602 42

Spencer, Donnie R.
Debarah
Ofc. 609 Main St.
Hazard, 41701
606-439-3311
Res. 609 Main Street
Hazard, 41701
606-439-3163
FP 1612 74

Williams, Cordell H.
Ofc. Hazard Clinic
Hazard, 41701
606-436-3123
Res. Woadland Park
Hazard, 41701
606-436-3472
IM 4106 44

PIKE

Allen, Ralph W.
Glima
Ofc. Rt. 1, Bax 44
Mt. Dara, FL, 32757
Res. Rt. 1, Box 44
Mt. Dora, FL, 32757
904-383-5778
FP 1602 38

Altman, Harry E.
Helen L.
Ofc. 261-277 Tawn Mt. Rd.
Pikeville, 41501
606-437-7356
Res. Rt. 3, Bax 277 F
Pikeville, 41501
606-432-3103
OBG 4106 65

Bentley, Can M.
Ofc. Rt. 1, Bax 79
Campbellsburg, 40011
Res. Campbellsburg, 40011
GP 1602 25

Black, Jr., Lowell J.
Ofc. Box 2589
Pikeville, 41505
606-437-4425
Res. Cowpen
Pikeville, 41501
606-432-2679
FP 1005 55

Buckley, George F.
Ofc. Methodist Hosp.
Pikeville, 41501
606-437-9621
Res. 606-432-4431
PATH 5909 52

Burian, Frank J.
Henrietta
Ofc. P.O. Box 1038
Sa. Williamsan, WV, 25661
Res. 11 Central Avenue
So. Williamsan, 41305
237-1301
FP 1602 22

Cassady, Ballard W.
Ann
Ofc. P.O. Bax 3369
Pikeville, 41501
606-437-6698
Res. Bax 3369
Pikeville, 41501
606-432-4251
SU 1602 46

Cox, Frederick G.
Ofc. South Main Trail
Box 2180
Pikeville, 41501
Res. South Mayo Drive
Pikeville, 41501
GP 1612 65

Davis, Russell H.
Leelah
Ofc. P.O. Bax 2617
Pikeville, 41501
606-437-6621
Res. N. Mayo Trail
Pikeville, 41501
606-437-6402
U 1602 46

De la Rosa, David M.
Ofc. P.O. Bax 130,
Hays Camp. Bldg.
Betsy Layne, 41605
EM 5088 57

Donmezer, Mehmet A.
Remziye
Ofc. Appalachian Regianal Hosp.
Sa. Williamson, WV, 25661
606-237-1010
Res. 2000 Central Ave.
S. Williamsan, 25661
606-237-6082
PATH 9301 53

Espanol, Marie Angeles
Hase
Ofc. P.O. Box 2193
Sa. Williamson, WV, 25661
Res. Bax 2193
Williamsan, WV, 25661
P

Evans, James D.
Mary Virginia
Ofc. Williamson Rd.
Pikeville, 41501
606-432-2533
Res. St. Martha Drive
Pikeville, 41501
606-437-7952
IM 1005 50

Fox, Mary P.
Ofc. Bax 936
Pikeville, 41501
606-432-2543
Res. Bax 936
Pikeville, 41501
606-432-3618
PH 1602 56

Gibson, Kermit D.
Ofc. P.O. Box 896
Elkhorn City, 41522
606-754-4158
Res. Rt. 1
Ashcamp, 41512
606-754-4536
GP 80

Hall, Ronald Douglas
Ofc. Town and Country Ctr.
Pikeville, 41501
606-432-5532
Res. Williamson Road
Pikeville, 41501
606-432-5532
D 1612 74

Hambley, William C.
Ofc. 206 Carolina Ave.
Pikeville, 41501
Res. 206 Caralina Avenue
Pikeville, 41501
606-437-6566
SU 1206 44

Johnson, William M.
Jodi
Ofc. Professianal Bldg.
Pikeville, 41501
Res. Box 838
Pikeville, 41501
IM 1602 66

Jones, Max P.
Ofc. P.O. Box 57
St. Simon Isle, GA 31522
Res. 807-B Mallery St.
St. Siman Isle, GA 31522
912-638-6764
IM 1602 44

Kim, Kil B.
Yaung K.
Ofc. Pikeville Radiology,
Bax 2648
Pikeville, 41501
606-432-1357
Res. Lancelat Village #5
Chlae Rd.
Pikeville, 41501
606-437-6872
R 7604 60

Kudva, Radha V.
Belvai V.
Ofc. ARH 2000 Central Ave.
So. Williamson, WV, 25661
606-237-8463
Res. 1728 West 4th Avenue
Williamson, 25661
304-235-7617
PD 5088 70

Kukreja, Rachpal S.
Avtar K.
Ofc. Bax 2978 Medical Bldg.
Pikeville, 41501
606-437-7355
Res. 113 Cedar Drive
Pikeville, 41501
606-432-4716
OPH 7014 66

Leedhanachoke, Oon
Dorathy
Ofc. P.O. Box 3369
Pikeville, 41501
606-437-6698
Res. N. Mayo Trail
Pikeville, 41501
606-432-8362
SU 9203 73

Lubbers, Roger L.
Ofc. P.O. Box 2617
Pikeville, 41501
606-437-6621
Res. Rt. 3, Box 227
Pikeville, 41501
606-437-4417
U 1206 72

Malempati, Indira
Srihari R.
Ofc. P.O. Box 2069
Pikeville, 41501
606-432-1458
Res. Sauth Mayo Trail
Pikeville, 41501
606-432-3405
OBG

Malempati, Srihari
Ofc. P.O. Bax 2069
Pikeville, 41501
606-432-1458
Res. 203 Walnut Drive
Pikeville, 41501
606-432-3405
SU

Malik, Ahmed M. A.
Ofc. 408 Main St.
Pikeville, 41501
Res. 408 Main Street
Pikeville, 41501
C

Mann, Ronald F.
Dianne
Ofc. Town & Cauntry
Shopping Ctr.
Pikeville, 41501
FP 1001 74

McGuire, Jr., Tom O.
Ofc. 261-277 Town Mauntain Rd.
Pikeville, 41501
Res. 101 Walnut Lane
Pikeville, 41501
OBG 1612 73

Mettu, Jyothi
Romonoroo V.
Ofc. P.O. Box 2665
Pikeville, 41501
606-437-4925
Res. P.O. 2665
Pikeville, 41501
606-432-2871
PD 5088 73

Mettu, Ramanarao V.
Ofc. Pikeville Medicol Bldg.
Pikeville, 41501
Res. Pikeville Medicol Bldg.
Pikeville, 41501
IM 5088 73

Meyer, Jr., Dexter
Mory M.
Ofc. 1510 Blue Ook Ln.
Brodenton, FL, 33529
Res. 1510 Blue Ook Lane
Bradenton, Flo., 33529
813-792-7164
OPH 1602 44

Mintu Valera, Remedios
Erlindo G.
Ofc. Pikeville Pediotrics Clinic
Pikeville, 41501
606-432-8178
Res. Box 227 K.
North Moyo Trail
Pikeville, 41501
606-437-4178
PD 8506 65

Modur, Raghuran S.
Sujo
Ofc. Methodist Hosp.
Pikeville, 41501
606-432-4390
Res. 410 Wolford St.
Pikeville, 41501
606-437-6305
R 7017 72

Muckenhausen, Christa
Lonny R.
Ofc. P.O. Box 431
Pikeville, 41501
606-437-4095
Res. P.O. Box 431
Pikeville, 41501
606-437-6070
N 6802 65

Mulliken, David K.
Virginia S.
Ofc. Town & Country
Shopping Cntr.
Pikeville, 41501
606-432-1486
Res. S. Moyo Troil
Pikeville, 41501
606-437-7512
OBG 3101 44

Nichols, Charles G.
Xio
Ofc. Professionol Bldg. #200
Pikeville, 41501
606-432-0191
Res. Box 2879
Pikeville, 41501
606-432-0191
FP 1612 71

Page, Harvey A.
Lindo
Ofc. Medicol Bldg.
Pikeville, 41501
606-432-2872
Res. Cedor Drive
Pikeville, 41501
606-432-2329
FP 3201 57

Pagtakhan, Leonor S.
Gene So
Ofc. Rt. 5, Box 265
Pikeville, 41501
606-432-0174
Res. Foxcroft Addition
Pikeville, 41501
606-432-5325
PD 5088 65

Passidomo, Michael A.
Ofc. Town & Country Plozo
Pikeville, 41501
606-432-0329
Res. Town & Country Plozo
Pikeville, 41501
606-432-0329
N 7402 69

Poulos, Alexander
Shoron Z.
Ofc. P.O. Box 2648
Pikeville, 41501
606-432-1357
Res. Rt. 1, Box 1595
Horold, 41635
606-478-9498
R 1612 77

Ruktanonchai, Pairoj
Suropee
Ofc. Pikeville Pediatric
Pikeville, 41501
606-437-9887
Res. P.O. Box 025
Roccoon, 41557
606-437-9837
PD 9203 72

Sanders, Ted J.
Georgio A.
Ofc. 18 So. Front Ave.
Prestonburg, 41653
Res. Stor Route #2
Prestonburg, 41653
P 1602 60

Scott, Jr., John H.
Sue
Ofc. Corolina Ave.
Pikeville, 41501
Res. P.O. Box 901
Pikeville, 41501
606-437-6639
GP 1602 44

Sowards, Charles F.
Shinobu
Ofc. P.O. Box 2808
Pikeville, 41501
606-639-2471
Res. Moyo Troil
Pikeville, 41501
606-432-3701
GP 2494 67

Stamper, Jr., Daniel H.
Cloro Helen
Ofc. Prof. Bldg., Box 2725
Pikeville, 41501
606-432-2335
Res. Mullins Addition
Pikeville, 41501
606-437-7537
GP 4106 62

Taylor, Jerry L.
Ruth A.
Ofc. 321 Moin St.
Pikeville, 41501
606-432-0123
Res. P.O. Box 169
Roccoon, 41557
606-432-0125
PD 1612 76

Thompson, Oscar W.
Plumo
Ofc. P.O. Box 72
Pikeville, 41501
606-432-2172
Res. Moyo Troil N.
Pikeville, 41501
606-437-6036
IM 1602 55

Thompson, Elvis R.
Margorite
Ofc. Professional Bldg.
Pikeville, 41501
606-432-0111
Res. 301 Cedor Drive
Pikeville, 41501
OTO 1602 56

Valera, Erlindo G.
Remedious Mintu
Ofc. 261-277 Town Mt. Rd.
Pikeville, 41501
606-432-5566
Res. N. Moyo Troil
Pikeville, 41501
606-437-4178
ANES 8506 63

Vongvises, Manosh
Siriporn
Ofc. Professional Assoc. Bldg.
Pikeville, 41501
606-432-0111
Res. Foxcroft Subdivision
Pikeville, 41501
606-432-5682
OTO 9203 72

Wilson, Charles F.
Pett
Ofc. Medical Bldg.
Pikeville, 41501
606-437-7355
Res. N. Moyo Troil
Pikeville, 41501
606-437-6511
OPH 1602 44

Wiss, Mary L.
Ofc. Hodges Bldg.
201 High St.
Pikeville, 41501
606-437-7500
Res. Pouley Addition
Pikeville, 41501
606-432-3618
SU 802 53

Wright, Terry L.
606-754-4933
Ofc. Odom Medicol Clinic
Elkhorn City, 41522
606-754-4112
Res. Box 738
Elkhorn City, 41522
GP 1602 75

PENDLETON

McKenney, Robert L.
Gornet D.
Ofc. 211 Shelby St.
Folmouth, 41040
606-654-4291
Res. 607 Mople Avenue
Folmouth, 41040
606-654-8211
FP 1602 54

Townsend, William M.
Ofc. 7830 So. A1A Hwy.
Melbourne Beoch, FL, 32951
Res. 7830 South A-1-A
Melbourne Beoch, FL, 32951
305-724-9741
GP 1602 34

Waldemayer, Carl A.
Ofc. Rt. 2, Box 411
Butler, 41006
Res. Rt. 2, Box 411
Johns Rood
Butler, 41006
606-472-7311
PH

Walsh, David W.
Dione
Ofc. Box 206
Folmouth, 41040
606-654-3343
Res. Box 206
Folmouth, 41040
606-654-8736
FP 3501 71

POWELL

Cecil, Samuel E.
Anne
Ofc. 139 Woshington St.
Stonton, 40380
606-663-2256
Res. 174 College Avenue
Stonton, 40380
606-663-2617
FP 1612 68

Noss, Charles G.
Tony
Ofc. Box 188
Stonton, 40380
606-663-2511
Res. Box 188
Stonton, 40380
606-663-2536
FP 1602 63

PULASKI

Betts, Gordon D.
Oneido
Ofc. 401 Bogle St.
Somerset, 42501
606-679-8318
Res. 11 Edgewood
Somerset, 42501
606-679-3358
OBG 1602 57

Blackburn, Jr., Glenn K.
Joyce
Ofc. 401 Bogle St.
Somerset, 42501
606-678-8155
Res. 114 Bosh Ave.
Somerset, 42501
606-679-7025
PD 1602 71

Clark, Danny M.
Joyce
Ofc. 401 Bogle St.
Somerset, 42501
606-679-8391
Res. 314 Robin Dr.
Somerset, 42501
606-679-1240
OBG 3441 62

Clark, Randall
Mocie
Ofc. 401 Bogle St.
Somerset, 42501
606-678-8545
Res. 120 Maplewood
Somerset, 42501
606-679-5330
U 4106 70

Crase, James D.
Jon
Ofc. 340 Bogle St.
Somerset, 42501
Res. 600 Little Creek Rd.
Somerset, 42501
606-679-3698
FP 1602 62

Fallazadeh, Hossein
Jeddo S.
Ofc. 340 Bogle St.
Somerset, 42501
606-679-5161
Res. 600 Hidden
Valley Lone
Somerset, 42501
606-679-5431
SU 6602 69

Frye, Jr., Veryl F.
Lindo
Ofc. P.O. Box 1008, 206
Somerset, 42501
606-679-5775
Res. 407 College Street
Somerset, 42501
606-679-3859
SU 1602 62

Gregory, Allen H.
Joyce M.
Ofc. 402 Gronde Ave.
Somerset, 42501
606-679-5551
Res. Lokeshore Drive
Burnside, 42519
606-561-4044
OBG 1602 71

Harrison, John N.
Gillion
Ofc. 340 Bogle St.
Somerset, 42501
606-679-8349
Res. 107 Shody Ln.
Somerset, 42501
606-679-4839
OTO 8101 71

Jasper, Robert Bryant
Lillion C.
Ofc. 120 Crab Orchord Rd.
Somerset, 42501
606-678-5092
Res. 120 Crob Orchord Rd.
Somerset, 42501
606-678-5092
SU 1602 41

Jasper, Patrick L.
Morgoret
Ofc. 401 Bogle St.
Somerset, 42501
606-678-8155
Res. 92 Linnwood Dr.
Somerset, 42501
606-679-3531
PD 4105 65

Jasper, Stephen T.
Mory
Ofc. 340 Bogle St.
Somerset, 42501
606-678-5130
Res. 701 Leof Lone
Somerset, 42501
606-679-2344
FP 1602 67

Jayme, Alberto M.
Milagros Y.
Ofc. Ookwood Intermedicol
Somerset, 42501
606-679-4361
Res. 2120 Ryon's Woy
Somerset, 42501
606-678-8732
GP 8503 61

Kelley, Stephen B.
Shoron
Ofc. 340 Bogle St.
Somerset, 42501
606-678-5137
Res. Cardinol Hills
Somerset, 42501
606-679-2546
FP 3440 62

Kiteck, Stephen S.
Solly
Ofc. 340 Bogle St.
Somerset, 42501
606-678-5137
Res. 1301 Pumphouse Rd.
Somerset, 42501
606-679-7284
FP 1612 75

Kovacs, Andrew J.
Kelly
Ofc. 340 Bogle St.
Somerset, 42501
606-679-7464
Res. 115 Wildcot Drive
Somerset, 42501
606-679-7102
ORS 5904 68

Lane, Dennis
Gwyn
Ofc. 340 Bogle St.
Somerset, 42501
606-679-7464
Res. Green Meodows
Subdivision
Somerset, 42501
606-679-5453
ORS 1320 67

Massey, William O.
Georgio
Ofc. E. French St.
Burnside, 42519
606-561-4322
Res. P.O. Box 456
Burnside, 42519
502-866-6878
GP 1602 58

Mays, E. Truman
Borboro
Ofc. 340 Bogle St.
Somerset, 42501
606-679-8389
Res. 801 Leof Lone
Somerset, 42501
SU 1602 58

McLeod, Robert N.
Dutch
Ofc. 401 Bogle St.
Somerset, 42501
606-678-8155
Res. Mockingbird Dr.
Somerset, 42501
606-678-5536
PD 3701 45

Medroso, Melanio Y.
Ofc. 2011 Merlin Ave.
Somerset, 42501
606-679-7441
Res. 2011 Merlin Ave.
Somerset, 42501
EM 8502 70

Miller, Lora S.
Ofc. Prof. Plozo
401 Bogle St. #207
Somerset, 42501
606-679-5284
Res. Towering Hills
Box 157
Noncy, 42544
606-646-6517
IM 1602 75

Morrow, Richard C.
Julie
Ofc. 401 Bogle St. 204
Somerset, 42501
606-679-5679
Res. 2118 Sundoy Dr.
Somerset, 42501
606-679-6887
U 102 74

Mufti, Aziz Gul
Nilofor
Ofc. 401 Bogle St.
Somerset, 42501
606-679-7316
Res. 603 Von St.
Somerset, 42501
606-679-7016
IM 8302 70

Nunemaker, Larry Wayne
Ofc. 401 Bogle St.
Somerset, 42501
606-679-7353
Res. 300 Bluebird Dr.
Somerset, 42501
606-679-8237
OBG 1602 74

Patel, Madhukanta J.
Jogendro A.
Ofc. 201 N. Brookhoven Dr.
Somerset, 42501
606-679-4023
Res. Somerset, 42501
ANES 7025 66

Radmanesh, Mohammad H.
Dorby
Ofc. P.O. Box 38
Somerset, 42501
606-679-5127
Res. 107 Wildcot Dr.
Somerset, 42501
606-679-5127
ANES 5088 62

Rose, Stephen W.
Rebecco
Ofc. 401 Bogle St.
Somerset, 42501
606-679-7461
Res. 500 Meadowlark Dr.
Somerset, 42501
606-679-2827
OPH 4501 70

Schultz, Arthur F.
Sherry
Ofc. Lake Cumberlond
Medicol Ctr.
Somerset, 42501
Res. 111 Green Hill Pork Dr.
Somerset, 42501
R 1612 65

Shepherd, Millard A.
Virginio
Ofc. 500 Bourne Ave.
Somerset, 42501
606-679-4416
Res. 211 Moy St.
Somerset, 42501
606-678-4577
PH 1602 53

Smith, Enos T.
Emily F.
Ofc. 520 Bourne Ave.
Somerset, 42501
606-678-8251
Res. Stanford Rd.
Somerset, 42501
606-679-2326
GP 1602 43

Spradlin, Marion Carroll
Lillie
Ofc. P.O. Box 89
Somerset, 42501
Res. Box 89
Somerset, 42501
606-678-8611
FP 1602 31

Stein, Orville J.
Sue
Ofc. 340 Bogle St.
Somerset, 42501
606-678-5137
Res. 206 College St.
Somerset, 42501
606-679-2872
FP 1602 62

Strand, Karl H.
Anne Elizabeth
Ofc. Loke Cumberland
Medical Ctr.
Somerset, 42501
606-679-5488
Res. 1451 N. Hwy. 1247
Somerset, 42501
606-679-5522
PATH 9004 66

Strunk, Danny J.
Mory Lee
Ofc. 401 Bogle St.
Somerset, 42501
606-678-8155
Res. 219 Linwood Dr.
Somerset, 42501
606-679-6273
PD 1602 68

Watkins, William T.
Annie
Ofc. 401 Bogle St.
Somerset, 42501
606-678-8155
Res. 125 Volunteer Drive
Somerset, 42501
606-679-2169
PD 4106 60

Weddle, Richard H.
Bitsy
Ofc. Somerset Center
Somerset, 42501
606-679-5837
Res. 208 College St.
Somerset, 42501
606-678-8773
GP 3441 41

Williams, Granville B.
Dorothy Emerson
Ofc. Eubonk, 42567
606-379-6211
Res. 515 O'Horn Drive
Donville, 40422
606-236-6742
GP 4106 42

ROCKCASTLE

Arvin, Orson L.
Bettye
Ofc. Newcomb St.
Mt. Vernon, 40456
606-256-2143
Res. Newcomb St.
Mt. Vernon, 40456
606-256-4897
FP 1612 71

Griffith, George W.
Ofc. Mt. Vernon, 40456
606-256-2961
Res. Mt. Vernon, 40456
606-256-5228
FP 1602 73

Monteyne, Peter J.
Ofc. P.O. Box 666
Mt. Vernon, 40456
606-256-5191
GP 5908 80

Thomsen, Andreas E. T.
Froncesco C.
Ofc. Rockcastle Co. Hosp.
Mt. Vernon, 40456
606-256-5113
Res. c/o Rockcastle Co. Hosp.
Mt. Vernon, 40456
606-256-5245
SU 8001 50

ROWAN

Barber, George C.
Joyce
Ofc. Moreheod Clinic
Morehead, 40351
606-784-6641
Res. Sherwood Forest Dr.
Moreheod, 40351
606-784-5911
FP 3205 60

Barker, Ernest G.
Thereso
Ofc. St. Cloire Medicol Ctr.
Moreheod, 40351
606-784-6111
Res. Jewel Lone
Forest Hills
Moreheod, 40351
606-784-8145
R 3201 65

Bauer, James L.
Suzanne M.
Ofc. 222 Fleming Ave.
Moreheod, 40351
606-784-6661
Res. Rt. 2, Box 36
Moreheod, 40351
606-784-4267
PATH 3109 68

Bennett, Shelley E.
Jonet
Ofc. Cove Run Clinic
Moreheod, 40351
606-784-7551
Res. Rt. 5, Box 572
Moreheod,40351
606-784-8758
SU 1612 69

Blair, Donald E.
Ofc. 301 E. Moin St.
Moreheod, 40351
606-784-8124
Res. 301 E. Moin St.
Moreheod, 40351
606-783-1314
FP 1602 67

Burchett, Troy L.
Corole
Ofc. Cove Run Clinic
425 Clinic
Moreheod, 40351
606-784-7551
Res. Lokeviews Hts.
Route 1
Moreheod, 40351
606-784-6865
U 1612 64

Caudill, C. Louise
Ofc. 310 E. Moin St.
Morehead, 40351
606-784-5602
Res. Forest Hills
606-784-4446
FP 1602 46

Dickerman, Jane
Louise Einhorn
Ofc. 234 Medicol Circle
Moreheod, 40351
606-784-6641
Res. Route 6, Box 1303
Moreheod, 40351
606-784-9459
OPH 3109 75

Eddison, Grace
Ofc. P.O. Box 666
Woter St.
Owingsville, 40360
606-674-6396
Res. Rt. 4
Corlisle, 40311
606-289-5980
IM 3101 60

Fisher, James M.
Ann
Ofc. 316 W. Second St.
Moreheod, 40351
606-784-4878
Res. Rt. 5, Box 711
Moreheod, 40351
606-784-4257
OBG 4204 60

Fossett, Ralph T.
Borbora
Ofc. Cove Run Clinic
425 Clinic Dr.
Moreheod, 40351
606-784-7551
Res. Rt. 1, Box 84
Morehead, 40351
606-784-7924
ORS 1612 66

Franks, Charles D.
Goil
Ofc. Cave Run Clinic
425 Clinic Dr.
Moreheod, 40351
606-784-7551
Res. Rt. 1, Box 76
Moreheod, 40351
606-784-5943
U 1612 69

Lee, Ho Woon
Jung Nom
Ofc. Cove Run Clinic
425 Clinic Dr.
Morehead, 40351
606-784-7551
Res. Rt. 1, Box 102
Moreheod, 40351
606-783-1275
SU 7608 68

Marchand, Leopold
Regine
Ofc. Cove Run Clinic
425 Clinic Dr.
Moreheod, 40351
606-784-7551
Res. 20 Big Elm
Route 5
Moreheod, 40351
606-784-4558
OTO 5905 50

Proudfoot, Warren H.
Winifred
Ofc. Cove Run Clinic
Moreheod, 40351
606-784-7551
Res. 314 Cecil Drive
Moreheod, 40351
606-784-5314
SU 2001 50

Serey, Patrick J.
Jeon
Ofc. Cove Run Clinic
425 Clinic Dr.
Moreheod, 40351
606-784-7551
Res. Route 5, Box 185-C
Moreheod, 40351
606-784-8200
ORS 1612 64

Sexton, Robert E.
Lindo
Ofc. Cave Run Clinic
425 Clinic Dr.
Morehead, 40351
606-784-7554
Res. Pine Hills Subd.
Morehead, 40351
606-784-8765
FP 1602 73

Sinha, Ranjit
Ronjit
Ofc. 222 Med. Cir. Dr.
St. Cloire
Moreheod, 40351
Res. Route 1
Lokeview Heights
Moreheod, 40351
606-724-2017
P 7030 56

Smith, Karl H.
Ofc. Moin St.
Olive Hill, 41164
Res. Moin Street
Olive Hill, 41164
606-796-3944
GP 2479 60

Zylanoff, Phillipa L.
Ofc. 115 N. Wilsan Ave.
Marehead, 40351
606-783-1466
Res. 438 Knapp Ave.
Morehead, 40351
606-783-1989
ANES 3701 72

RUSSELL

Miles, Richard S.
Terry
Ofc. Dawell Rd.
Russell Springs, 42642
502-886-2440
Res. Dawell Rd.
Russell Springs, 42642
502-343-2335
FP 1602 77

Monin, James E.
Betty
Ofc. Jamestawn, 42629
502-343-4597
Res. 19 Oak Street
Jamestown, 42629
502-343-4388
FP 1602 57

Peck, Charles E.
Kathleen
Ofc. Russell Springs, 42642
502-866-3940
Res. P.O. 130
Russell Springs, 42642
502-866-3971
FP 1602 56

Pettey, Joe T.
Ofc. 169 N. Main
Russell Springs, 42642
GP 1602 51

SCOTT

Brown, R. Kendall
Nancy B.
Ofc. St. Luke Ploce
Geargetown, 40324
502-863-1231
Res. 906 Cincinnati Pike
Georgetawn, 40324
502-863-1885
FP 1602 62

Brown, Timothy C.
Anita Galdman
Ofc. Woshingtan Squore Ctr.
Geargetawn, 40324
502-863-2801
Res. 3000 Fairway Court
Georgetawn, 40324
502-863-5601
OBG

Bynum, Gus A.
Hazel W.
Ofc. St. Luke Place
Georgetown, 40324
502-863-1231
Res. 611 S. Homiltan St.
Georgetown, 40324
502-863-0148
FP 2403 72

Cantrill, James C.
Ewing B.
Ofc. St. Luke Ploce
Geargetown, 40324
502-863-1231
Res. 324 East Jacksan St.
Georgetown, 40324
502-863-0711
FP 4501 50

Coblens, Harry C.
Geneva
Ofc. 1121 Inco Trail
Geargetawn, 40324
502-863-3363
Res. 903 N. Thatcher Rd.
River Forest, IL, 60305
312-366-6484
SU 1242 35

McBrayer, Lucien F.
Michele
Ofc. St. Luke Place
Georgetawn, 40324
502-863-1231
Res. 116 Highland Ct.
Geargetawn, 40324
502-863-1526
FP 1602 76

Mohiuddin, Masarrat
Mahommed
Ofc. 427 W. Moin
Georgetown, 40324
502-863-4501
Res. 202 Cherakee Trail
Georgetown, 40324
502-863-2502
FP 7028 65

Mukherjee, Sudhideb
Alaka
Ofc. St. Luke Place
Georgetawn, 40324
502-863-3633
Res. 1113 Yuma Troil
Geargetown, 40324
502-863-4227
SU 7031 53

Santa-Teresa, Ben
Corazon Andal
Ofc. Ford Memorial Hosp.
Geargetown, 40324
502-863-4930
Res. 119 Creekside Drive
Geargetown, 40324
502-863-5913
IM 5088 58

Tuttle, Fred T.
Karen L.
Ofc. 427 W. Main St.
Georgetown, 40324
502-863-5994
Res. 503 Aztec Trail
Georgetown, 40324
502-863-5955
FP 1602 76

Young, Thomas Lee
Tereso T.
Ofc. Washingtan Square
Geargetawn, 40324
Res. 623 S. Broodwoy
Geargetawn, 40324
502-863-9304
PD 1602 76

SHELBY

Chatham, Donald
Betty Jean
Ofc. 615 Woshington St.
Shelbyville, 40065
502-633-3525
Res. 813 Plainview Dr.
Shelbyville, 40065
502-633-4272
FP 1602 52

Hamm, Robert W.
Betty
Ofc. 515 Haspital Dr.
Shelbyville, 40065
502-633-3341
Res. 933 Ashland Ave.
Louisville, 40215
502-633-3349
SU 1602 46

Kotheimer, Anita R.
Ofc. 729 Hospital Dr.
Shelbyville, 40065
OBG 1602 77

Leonard, Jr., Thomas P.
Linda E.
Ofc. 1038 Woshington St.
Shelbyville, 40065
502-633-6625
Res. 36 Smithfield Rood
Shelbyville, 40065
502-633-2425
GP 1602 65

McKee, Willis P.
Pamelo J.
Ofc. P.O. Box 425
Shelbyville, 40065
502-633-6062
Res. Rt. 5, Box 228
Frankfort, 40065
502-633-1771
SU 1602 39

Powers, William
Sondro
Ofc. #5 Village Plaza
Shelbyville, 40065
502-633-4622
Res. Rt. 1, Calony Drive
Shelbyville, 40065
502-633-5762
FP 1602 67

Smith, James R.
Sheri
Ofc. 615 Washington St.
Shelbyville, 40065
502-633-3525
Res. 820 Ashland Ave.
Shelbyville, 40065
502-633-0570
FP 1612 79

Wainscott, Barry
Susan D.
Ofc. 419 Washington St.
Shelbyville, 40065
502-633-1243
Res. 205 Wooded Falls Rd.
Middletawn, 40243
502-244-1291
PH 1602 79

Waldridge, Ronald E.
Kay
Ofc. #5 Villoge Plaza
Shelbyville, 40065
502-583-2300
Res. RR No. 1, Box 56
Shelbyville, 40065
502-633-2658
FP 1602 66

SIMPSON

Beasley, Lillard F.
Jane
Ofc. S. College St.
Franklin, 42134
Res. 320 S. College St.
Franklin, 42134
502-586-5164
SU 4106 31

Pulliam, James M.
Sylvia
Ofc. Pulliam Clinic
Fronklin, 42134
502-586-3258
Res. 310 Timberlane Drive
Franklin, 42134
502-586-3797
FP 1602 70

Reynolds, Roy D.
Shoran M.
Ofc. 207 Sa. Callege St.
Franklin, 42134
502-586-9581
Res. 318 South Main St.
Franklin, 42134
502-586-7258
FP 1612 75

Smith, Bruce C.
Corolyn
Ofc. 108 Narth Woter St.
Franklin, 42134
Res. 1530 Griffith Ave.
Owensbara, 42301
GP 4106 70

Wilwayco, Alfonso V.
Kay
Ofc. 1211 Brookhaven Rd.
Franklin, 42134
502-586-8281
Res. 304 Austin Drive
Franklin, 42134
502-586-4779
GP 8507 55

SPENCER

Casper, Norvin L.
Mary Laretta
Ofc. Rt. 2
Blaamfield, 40008
Res. RR #2, Box 226B
Blaamfield, 40008
SU 3701 40

Skaggs, William K.
Betty
Ofc. Main St.
Taylorsville, 40071
502-477-2206
Res. Box 427
Taylarsville, 40071
502-477-2912
FP 1602 55

TAYLOR

Angel, James R.
Sherri
Ofc. 301 N. Columbio Ave.
Compbellsville, 42718
502-789-2471
Res. 301 N. Columbio Avenue
Compbellsville, 42718
502-789-2475
U 1701 80

Brooks, Bobby J.
Cynthia
Ofc. Rt. 2, Greenbrier
Compbellsville, 42718
502-789-3410
Res. Rt. 2
Wildflower Drive
Campbellsville, 42718
502-465-2343
FP 1602 73

Chambers, Henry F.
Peggy
Ofc. 307 Eost Broodwoy
Campbellsville, 42718
502-465-8133
Res. 3 Cherokee Drive
Campbellsville, 42718
502-465-5263
FP 1602 52

Ewing, James A.
Betty N.
Ofc. 105 Greenbriar Dr.
Suite A
Campbellsville, 42718
502-465-3595
Res. 413 Lokeview Drive
Compbellsville, 42718
502-465-4993
OTO 1602 68

Hall, Lyman S.
Myro D.
Ofc. RR #5, Box A
Campbellsville, 42718
Res. 700 N. Central Ave.
Campbellsville, 42718
OBG 1602 25

Hall, Michael M.
Ofc. 515 Lebonan Ave.
Campbellsville, 42718
GP 1602 33

Mann, Wanless R.
Becky
Ofc. Rt. 5
Campbellsville, 42718
502-465-4841
Res. Rt. #5
Compbellsville, 42718
502-465-5168
GP 1602 53

Shely, Forest F.
Roberta H.
Ofc. 603 E. First St.
Campbellsville, 42718
502-789-2349
Res. 407 Lokeview Drive
Campbellsville, 42718
502-465-8643
GP 1602 49

Shipp, Robert S.
Linda
Ofc. 1760 N. Hwy. 68
Campbellsville, 42718
502-465-3568
Res. Raute 3, Box HB 9
Campbellsville, 42718
502-465-3673
OBG 1612 73

Shively, Eugene H.
Susan
Ofc. Hearthside Medical Ctr.
Campbellsville, 42718
502-465-2821
Res. 114 Kensingtan Way
Campbellsville, 42718
502-465-2521
SU 1602 70

Wieman, Thomas
Goyle Marie
Ofc. Rt. 3
Hearthside Praf. Ctr.
Campbellsville, 42718
502-465-2821
Res. Raute 2 Palestine
Campbellsville, 42718
502-789-1603
SU

Wilson, Roy G.
Iona
Ofc. 319 High St.
Campbellsville, 42718
502-465-4442
Res. 319 High St.
Campbellsville, 42718
502-465-4743
FP 1602 43

TODD

Bell, Jr., Hank
Glenda
Ofc. E. Main St.
Elktan, 42220
Res. P.O. Bax 187
Elktan, 42220
FP 1612 66

Brock, Lawrence O.
Ofc. 201 E. Main St.
Elktan, 42220
FP 1602 73

Campbell, Jr., Aubrey G.
Joyce
Ofc. Jennie Stuart
Medical Ctr.
Hopkinsville, 42240
502-886-5221
Res. P.O. Bax 556
Elkton, 42220
502-265-2531
EM 1612 73

Manthey, Frank A.
Daris J.
Ofc. P.O. Bax 368
Elktan, 42220
502-265-2531
Res. Sunset Drive
Elkton, 42220
502-265-5934
FP 3115 58

Woodall, Jesse C.
Mabel
Ofc. 10 Main St.
Trenton, 42286
502-466-5523
Res. Rase Hill
Trenton, 42286
502-466-5637
IM 4106 32

TRIGG

Anderson, III, William B.
Elizabeth
Ofc. P.O. Box 1249
Cadiz, 42211
502-522-6634
Res. Route #2
Cadiz, 42211
502-522-7978
FP

Pavon, Hector Eduardo
Larna
Ofc. Rt. 6, Bax 323
Codiz, 42211
Res. Route 4
Cadiz, 42211
502-522-7997
GP 6901 67

Roy, Hirendra K.
Meena
Ofc. Trigg Co. Hasp.
Cadiz, 42211
Res. Route #2
Blue Springs Shares
Codiz, 42211
502-924-5810
SU

TRIMBLE

Cooper, John I.
Ofc. Caaper Clinic
Bedford, 40006
D 1602 61

Cooper, Jr., Carl
Virginia
Ofc. Cooper Clinic
Bedford, 40006
502-255-3282
Res. Raute 2
Bedford, 40006
502-255-3255
FP 1602 52

MacGregor, Roderick H.
Glenna R.
Ofc. RR 2, US 42
Bax 37
Bedford, 40006
502-255-7732
Res. Bax 87 A
King's Ridge
Carrallton, 41008
502-732-5734
FP 5903 73

UNION

Malubay, Fiorello G.
Ofc. P.O. Box 22
Marganfield, 42437
Res. Morgonfield, 42437
SU 8507 63

Soni, Vinodchandra S.
Geeto
Ofc. Union Ca. Hasp.
Morgonvield, 42437
502-333-4340
Res. 222 Volley Drive
Morganfield, 42437
502-389-0504
SU 5088 73

WEBSTER

Bedell, Kevin
Lynn
Ofc. 301 E. Moin St.
Providence, 42450
502-667-7017
Res. 306 E. Main St.
Providence, 42450
606-667-2564
IM

Tiu, Jaime Tiong B.T.
Ofc. 204 East Main St.
Sebree, 42455
GP 5088 72

Alexander, Alex J.
Ofc. P.O. Box 303
Midwoy, 40347
Res. 3543 Totes Creek Rd.
#169
Lexingtan, 40502
606-273-9712
IM 1701 67

Allen, David T.
Carol Ann
Ofc. 275 E. Main
Frankfart, 40621
502-564-3970
Res. 31 Heritage
Versailles, 40383
606-873-9333
PH 3406 66

Biddle, Robert A.
Martha S.
Ofc. 171 Moore Dr.
Lexington, 40503
606-276-4424
Res. 130 Cherakee Pk.
Lexingtan, 40503
606-277-8747
FP 1612 73

Childers, William E.
Ofc. 360 Amsden Ave.
Versailles, 40383
606-873-8111
Res. 157 High St.
Versailles, 40383
606-873-8511
IM 1602 78

Clifford, Angela L.
Ofc. P.O. Box 571
200 Fronkfort St.
Versoilles, 40383
606-873-8301
Res. P.O. Box 112
Versoilles, 40383
606-873-7173
SU 1612 74

Fisher, Norman S.
Jo
Ofc. Box 277
Midwoy, 40347
606-846-4445
Res. 321 Turner St.
Midwoy, 40347
606-846-4139
FP 1602 58

Goodin, C. Dale
Cheryl
Ofc. Amsden Ave.
Versoilles, 40383
606-873-8111
Res. Route 3, Box 124A
Versoilles, 40383
606-873-6699
IM 1602 78

Graul, William J.
Solly
Ofc. 200 Fronkfort St.
Versoilles, 40383
606-783-5361
Res. 118 Stourbridge
Versoilles, 40383
606-873-5818
FP 1602 61

Hall, C. Noel
Ann
Ofc. Box 27
200 Fronkfort St.
Versoilles, 40383
606-873-3581
Res. 284 Rose Hill
Versoilles, 40383
606-873-4243
GP 1602 41

Parrott, II, Olson
Cothy
Ofc. 360 Amsden
Suite 403
Versoilles, 40383
606-873-4675
Res. 827 Kings Woy
Versoilles, 40383
606-873-9474
OBG 1612 75

Reed, George C.
Nell
Ofc. 130 E. Green St.
Versoilles, 40383
606-873-3651
Res. 101 Show Avenue
Versoilles, 40383
606-873-3422
FP 2101 41

Roach, Benjamin F.
Ruth
Ofc. Box 277
Midwoy, 40347
606-846-4445
Res. Porrish Hill Form
Midwoy, 40347
606-846-4330
FP 3207 43

Roach, James P.
Morilyn G.
Ofc. Winter St.
Midwoy, 40347
606-846-4445
Res. Box 612
Midwoy, 40347
606-846-4697
FP 1612 78

Yalkut, Fikret T.
Sondro
Ofc. 229 No. Moin
Versoilles, 40383
606-873-8880
Res. 3716 Solisbury Drive
Lexington, 40504
606-252-3307
U 9302 48

WOLFE

Burnette, George E.
Ofc. Medicol Center
Compton, 41301
606-668-6932
FP 1602 78

Maddox, Paul F.
Potricio L.
Ofc. P.O. Box 127
Compton, 41301
606-668-3120
Res. Box 730
Compton, 41301
606-668-3259
FP 1602 52

WAYNE

Breeding, Robert B.
Lytho B.
Ofc. 302 No. Moin St.
Monticello, 42633
606-348-5431
Res. 310 N. Moin
Monticello, 42633
606-348-4356
GP 801

Duncan, Frank Lewis
Elizobeth
Ofc. P.O. Box 440
Monticello, 42633
606-348-5696
Res. Box 440
Monticello, 42633
606-348-5466
GP 1602 36

Kelsay, Jr., Wm. Robert
Evongeline
Ofc. Box 335
Monticello, 42633
Res. Monticello, 42633
606-348-7391
PH 1602 39

McFarland, Ronald M.
Ruby
Ofc. Town ond Country
Plozo
Monticello, 42633
Res. 209 Crowfordview
Monticello, 42633
FP

McHargue, Claude L.
Gleto M.
Ofc. RR 5, Box 186
Monticello, 42633
606-348-5171
Res. 206 Woyne St.
Monticello, 42633
606-348-5881
GP 1602 52

Patel, J. A.
Modhy J.
Ofc. 100 No. Moin St.
Monticello, 42633
606-348-6072
Res. 201 N. Brookhoven Drive
Somerset, 42501
606-679-4023
FP 5088 66

Phillips, Jr., James K.
Foye C.
Ofc. Rt. 5, Box 173
Monticello, 42633
606-348-8482
Res. 210 Crowford View Drive
Monticello, 42633
606-348-6116
GP

Pratt, Gerald R.
Julio
Ofc. Rt. 5, Box 173
Monticello, 42633
606-348-8482
Res. 709 Costle Street
Monticello, 42633
606-348-5259
FP 1612 74

Roberts, Mack
Almo
Ofc. Michigon Ave.
Monticello, 42633
606-348-3606
Res. Box 575
Monticello, 42633
606-348-4071
GP 1602 32

Selvidge, William
Billie
Ofc. Town ond Country Plozo
Monticello, 42633
Res. Route 5, Box 348
Monticello, 42633
PD 75

Simmons, John Woodrow
Morjorie
Ofc. 215 Columbio
Monticello, 42633
606-348-8464
Res. Box 548
Monticello, 42633
606-348-4051
FP 1602 47

WARREN

Baird, Thomas H.
Noncy D.
Ofc. #4 Doctors Bldg.
Bowling Green, 42101
502-842-2426
Res. 1913 Noshville Rood
Bowling Green, 42101
502-843-3656
GP 1602 58

Beckett, Walter F.
Ofc. 418 Stote St.
Bowling Green, 42101
GP 4107 28

Begley, William G.
Jenno
Ofc. 1332 Andreo
Bowling Green, 42101
502-782-7768
Res. 1030 Newmon Dr.
Bowling Green, 42101
502-781-5795
OTO 1602 61

Black, John S.
Toby
Ofc. P.O. Box 2020
Bowling Green, 42101
Res. 1040 Grider Pond Rd.
Bowling Green, 42101
ANES 2402 73

Blackburn, John P.
Donno
Ofc. 1326 Andreo St.
Bowling Green, 42101
502-781-1588
Res. 1010 Compbell Ln.
Bowling Green, 42101
502-843-4125
TS 4105 58

Buono, Frank L.
Edie
Ofc. 1777 Ashley Circle
Bowling Green, 42101
502-782-7800
Res. 2069 McCubbin
Bowling Green, 42101
ORS 3709 62

Crosby, Robert T.
Joyce Ann
Ofc. 1403 Andreo St.
Bowling Green, 42101
502-781-4909
Res. Rt. 19, Box 16
Elrod Rood
Bowling Green, 42101
502-781-4515
OPH 1705 65

Dobson, Carl
Julie
Ofc. 1312 Western Ave.
Bowling Green, 42101
Res. Rt. 2, Cemetery Rd.
Bowling Green, 42101
502-781-1773
OBG 102

WARREN

Donelson. Jr.. Andrew
Tereso
Ofc. 825 4th St.
Bowling Green, 42101
502-781-6075
Res. 841 Newberry
Bowling Green, 42101
502-781-1391
OBG 4106 68

Downing, John E.
Sheryl
Ofc. 1403 Andreo St.
Bowling Green, 42101
502-781-4909
Res. 1618 Volleywood Dr.
Bowling Green, 42101
502-781-1416
OPH 1602 62

Fisher, Vaughn L.
Ofc. 730 Foirview Ave.
Bowling Green, 42101
502-781-4635
Res. 906 Stote Street
Bowling Green, 42101
502-842-6802
ORS 4106 54

Fitts, John O.
Jerre
Ofc. 1109 Stote St.
Bowling Green, 42101
Res. 805 Newmon Dr.
Bowling Green, 42101
IM 4105 70

Funk, Jesse T.
Flo
Ofc. 810 Wokefield
Bowling Green, 42101
502-842-2560
Res. 810 Wokefield Drive
Bowling Green, 42101
SU 4105 37

Gilbert, James T.
Jone
Ofc. 1109 Stote St. Clinic
Bowling Green, 42101
502-781-5111
Res. 1510 Scottsville Rd.
Bowling Green, 42101
502-843-3921
IM 4105 34

Goodwin, J. Roger
Corolyn
Ofc. 944 Foirview Ave.
Bowling Green, 42101
502-781-7212
Res. 525 Cloremoor
Bowling Green, 42101
502-781-6884
U 1602 66

Goodwin, Robert A.
Joon
Ofc. 1777 Ashley Circle
Bowling Green, 42101
Res. 2119 Sycomore Dr.
Bowling Green, 42101
ORS 1211 64

Green, Richard O.
Jonet
Ofc. 707 E. 10th St.
Bowling Green, 42101
Res. 320 St. Albons Drive
Bowling Green, 42101
502-843-8442
GP 4105 29

Green, Jr., Lawrence P.
Shirley A.
Ofc. 1326 Andreo Dr.
Bowling Green, 42101
502-782-9086
Res. Route 2, Box 199-C
Alvoton, 42122
P 3101 58

Grise, Richard F.
Wilmo
Ofc. 1221 Ashley Circle
Bowling Green, 42101
502-842-1669
Res. 818 Meodowlork Dr.
Bowling Green, 42101
502-781-8822
SU 4105 44

Hall, Tom E.
Almo
Ofc. Worren County Hosp.
Bowling Green, 42101
Res. 2040 McCubbin
Bowling Green, 42101
R 1602 56

Harris, Henry S.
Dorothy
Ofc. 944 Foirview Ave.
Bowling Green, 42101
502-781-7212
Res. Ewing Ford Rd.
Bowling Green, 42101
502-781-5496
U 4105 40

Hatcher, Ronald L.
Elsie
Ofc. 1312 Western Ave.
Bowling Green, 42101
502-781-3414
Res. 3 Chestnut Hill Ct.
Bowling Green, 42101
502-781-5641
OBG 1005 67

Hulsey, Timothy K.
Ofc. 730 Foirview Ave.
Bowling Green, 42101
502-781-0177
Res. 1029 Shive Lone
Bowling Green, 42101
502-781-0265
PS 4105 74

Keen, Harold
Morilyn
Ofc. 1227 Ashley Circle
Bowling Green, 42101
502-843-8529
Res. 909 Smith Ln.
Bowling Green, 42101
502-845-5770
IM 4106 44

Kernohan, William J.
Winifred
Ofc. 1167 31 W. By Poss
Bowling Green, 42101
502-842-6925
Res. 928 Porkwoy
Bowling Green, 42101
P 7304 50

Kuebler, II, Walter J.
Potricio G.
Ofc. 250 Pork St., Box 56
Bowling Green, 42101
502-581-7178
Res. 1010 Grider Pond Rood
Bowling Green, 42101
R 1705 58

Martin, Jerry W.
Jimmie
Ofc. 1167 31 W Byposs
Bowling Green, 42101
502-842-6164
Res. Noshville Rood
Bowling Green, 42101
502-842-4393
FP 1602 63

Meiers, Henry N.
Modeline
Ofc. 1109 Stote St.
Bowling Green, 42101
502-781-5111
Res. 860 Richlond Dr.
Bowling Green, 42101
502-843-9879
SU 4105 55

Moore, Frank H.
Jeon
Ofc. 1109 Stote St.
Bowling Green, 42101
502-781-5111
Res. McForlond's Beoch Rd.
Bowling Green, 42101
502-842-5161
IM 1701 41

Moore, William T.
Lou
Ofc. P.O. Box 20161
Bowling Green, 42101
502-782-7720
Res. Rt. 11
Cumberlond Troce Rd.
Bowling Green, 42101
502-781-3059
OTO 1602 62

Newberry, Robert C.
Jocqueline
Ofc. Medicol Ctr., Box 56
Bowling Green, 42101
502-781-2150
Res. 1434 Mt. Ayr
Bowling Green, 42101
502-782-0198
PATH 3501 69

Olson, Lynn
Ofc. 730 Foirview
Bowling Green, 42101
502-781-4635
Res. 812 Sycomore Ct.
Bowling Green, 42101
502-782-9100
ORS

Parks, Paul J.
Phyllis
Ofc. 1109 Stote St.
Bowling Green, 42101
502-781-5111
Res. 622 Hompton Rood
Bowling Green, 42101
502-842-1811
IM 1602 48

Patton, Marcus
Foye
Ofc. 1801 Ashley Circle
Bowling Green, 42101
Res. Rt 2, Box 111-A
Cemetery Rd.
Bowling Green, 42101
502-781-2757
ANES 1602 69

Perez, M. Robert
Gerry
Ofc. 1109 Stote St.
Bowling Green, 42101
502-781-5111
Res. 2045 McCubbin Drive
Bowling Green, 42101
502-781-3990
U 5301 59

Riehm, James D.
Jonie
Ofc. 1801 Ashley Circle
Bowling Green, 42101
502-781-4330
Res. 501 Woodlond Avenue
Bowling Green, 42101
502-782-1462
PATH 1602 77

Rosdeutscher, Harold D.
Wondo
Ofc. P.O. Box 1460
Suite 109
Bowling Green, 42101
502-781-8832
Res. 803 Sycomore Ct.
Bowling Green, 42101
502-781-6721
R 1612 66

Rue, Nelson B.
Sue
Ofc. 1109 Stote St.
Bowling Green, 42101
Res. 1030 Grider Pond Rood
Bowling Green, 42101
502-842-8801
SU 1602 56

Russell, William B.
Anno J.
Ofc. 1109 Stote St.
Box 3500
Bowling Green, 42101
502-781-5111
Res. 719 Sherwood Drive
Bowling Green, 42101
502-781-6664
IM 2101 58

Rutledge, Carl E.
Eloine
Ofc. Worren County Hosp.
Bowling Green, 42101
502-781-2150
Res. 2019 Grondview
Bowling Green, 42101
502-842-4594
PATH 1602 55

Rutledge, Marilyn T.
Ofc. College St.
Smiths Grove, 42171
502-563-4311
Res. 1914 Bybee
Bowling Green, 42101
502-843-1062
GP 1602 64

WARREN—WASHINGTON—WHITLEY

Scott, L. Jack
Jo Jeon
Ofc. P.O. Box 2020
Bowling Green, 42101
502-781-4330
Res. Route 2
Alvoton, 42122
502-781-3230
ANES 1602 60

Smith, Samuel A.
Cheryl
Ofc. Rt. 2, Box 1012
Drokesboro Dr.
Bowling Green, 42101
502-781-4330
Res. Rt. 2, Box 1012
Drokesboro Dr.
Bowling Green, 42101
502-843-1606
PATH 1602 73

Smith, Ladonna S.
Doniel L.
Ofc. 1109 Stote St.
Bowling Green, 42101
502-781-1111
Res. 3114 Huntmoster Drive
Bowling Green, 42101
502-782-2064
R 1602 78

Thompson, Ronald H.
Lyndo
Ofc. 1312 Western Ave.
Bowling Green, 42101
Res. 2103 Sycomore Dr.
Bowling Green, 42101
502-782-9024
OBG 1602 75

Toomey, Lawrence O.
Lou
Ofc. 822 Covington
Bowling Green, 42101
Res. 822 Covington Avenue
Bowling Green, 42101
IM 1602 30

Tyler, Terry W.
Edie
Ofc. 739 Newmon Dr.
Bowling Green, 42101
502-781-8833
Res. 739 Newmon Dr.
Bowling Green, 42101
502-781-7791
R 1612 73

Warren, Walter
Andreo
Ofc. P.O. Box 101
Bowling Green, 42101
502-842-4811
Res. Route 15, Box 98
Bowling Green, 42101
502-842-6608
N 903 72

Wennerbom, John A.
Shirley
Ofc. P.O. Box 687
Bowling Green, 42101
502-781-2150
Res. 829 Moorelond Drive
Bowling Green, 42101
502-781-2150
PATH

West, Harold F.
Stephonie
Ofc. WKU-Student Heolth Serv.
Bowling Green, 42101
502-745-5641
Res. 2025 Borberry Avenue
Bowling Green, 42101
502-782-3505
FP 3713 48

Wiesemann, Richard
Rosie
Ofc. Route 19
Bowling Green, 42101
Res. Rt. 3, Crestloke Woy
Bowling Green, 42101
502-782-9098
R 1612 73

Willoughby, James O.
Betty Lou
Ofc. 727 Lourel Ave.
Bowling Green, 42101
502-842-5614
Res. 386 Cedor Ridge
Bowling Green, 42101
502-842-3583
OPH 1602 47

Wilson, Luther M.
Ofc. 1791 Ashley Circle
Bowling Green, 42101
502-781-4090
Res. 2151 Noshville Rood
Bowling Green, 42101
502-842-0812
GP 1602 46

Woodall, Jr., Gilbert E.
Ann D.
Ofc. GMAD-Corrette
Box Q
Bowling Green, 42101
502-781-7800
Res. 909 Wrenwood Drive
Bowling Green, 42101
502-781-9665
OM 4106 77

Yurchisin, Mark J.
Ofc. 825 Fourth St.
Bowling Green, 42101
502-781-0075
Res. Rt. 15, Box 95
Bowling Green, 42101
502-782-1148
OBG 904 78

Zeigel, Howard V.
Eleonor
Ofc. Western KY University
Bowling Green, 42101
502-745-5641
Res. 1624 Kenilwood Woy
Bowling Green, 42101
502-781-1407
GP 4106 44

WASHINGTON

Hamilton, Richard A.
Evelyn
Ofc. 219 W. Moin St.
Springfield, 40069
606-336-7795
Res. Willisburg Rd.
Springfield, 40069
606-336-3689
FP 1602 39

Howard, Charles D.
Ofc. 104 Covington Ave.
Springfield, 40069
606-336-7781
Res. 308 E. Grundy Avenue
Springfield, 40069
606-336-7022
GP 1602 61

Koh, Suk K.
Sook
Ofc. 203 Wolnut St.
Springfield, 40069
606-336-3914
Res. 302 W. Virginio Ave.
Springfield, 40069
606-336-9920
SU 7603 57

Wells, Brian F.
Ofc. 218 W. Moin St.
Springfield, 40069
606-336-9801
Res. 101 W. Grundy Ave.
Springfield, 40069
606-336-9428
FP 1612 79

WHITLEY

Baker, Jr., Glen R.
Ofc. 1007 18th St.
P.O. Box 850
Corbin, 40701
606-528-0305
PUD 1602 68

Barton, Donald C.
Joon E.
Ofc. Doctors Pork
Corbin, 40701
606-528-2124
Res. 1014 Circle Drive
Corbin, 40701
606-528-5173
FP 1602 60

Barton, P. Bruce
Arlene
Ofc. Doctors Pork
Corbin, 40701
Res. Rt. 1, Box 364
Corbin, 40701
FP 1602 66

Briscoe, C. William
Morsho
Ofc. Doctors Pork
Corbin, 40701
606-528-1414
Res. Doctors Pork Bldg.
Corbin, 40701
P 2403 66

Buttermore, Willard M.
Jeon
Ofc. 311 Chestnut
Corbin, 40701
Res. 311 Chestnut
Corbin, 40701
OPH 4106 39

Catron, Frank H.
Jonie
Ofc. 1705 Forrest Dr.
Corbin, 40701
606-528-7170
Res. 110 Podgett Street
Corbin, 40701
606-528-7300
OBG 1602 60

Cramer, John R.
Chorlotte
Ofc. Rt. #8, Box 255F
Forest Hills
Corbin, 40701
Res. 162 Connonode Troil
Corbin, 40701
GP 1612 74

Dane, Robert
Toni L.
Ofc. Americon Greeting Cord Rd.
Corbin, 40701
606-528-7010
Res. 403 N. Podgett
Corbin, 40701
606-523-0412
P 1403 53

Daniel, William T.
Noncy
Ofc. 103 Center St.
Corbin, 40701
606-523-1042
Res. Cordon Hill
Corbin, 40701
606-528-6334
R 1602 54

Dawson, Jr., James D.
Robin S.
Ofc. 1708 Forest Dr.
Corbin, 40701
606-528-5527
Res. 1236 Forest Circle
Corbin, 40701
606-528-6777
OBG 1612 77

Eads, William Stuart
Ofc. 107 So. Kentucky Ave.
Corbin, 40701
606-528-0138
OPH

Hacker, William D.
Koy
Ofc. Doctor's Pork
Corbin, 40701
Res. 161 Connonode Troil
Corbin, 40701
PD 1612 72

Halbleib, Ross A.
Ofc. Doctors Pork
Corbin, 40701
PD 1612 75

WHITLEY

Hamilton, Harry A.
Betty
Ofc. Doctor's Park
Corbin, 40701
606-528-6202
Res. Pine
Corbin, 40701
606-528-4824
SU 1602 56

Jorjani, Manoocheh
Jeon
Ofc. 1708 Forest Dr.
Corbin, 407C1
606-528-2272
Res. 1708 Forest Drive
Corbin, 40701
606-528-7115
SU 5088 55

Karr, Leslie E.
Cloro
Ofc. Doctor's Pork
Corbin, 40701
606-528-7111
Res. Rt 2, Box 279E
Corbin, 40701
606-528-5656
FP 1602 66

MacKay, Jean M.
Monoocheh
Ofc. 1709 Forest Dr.
Corbin, 40701
606-528-2272
Res. 1708 Forest Dr.
Corbin, 40701
606-528-7115
IM 8702 52

Moses, Bernard C.
Penny
Ofc. Jockson Moll Office
Williamsburg, 40769
606-549-5052
Res. Williomsburg, 40769
606-528-6337
FP 1612 76

Ohler, Raymond A.
June M.
Ofc. P.O. Box 1030
Corbin, 40701
606-528-3000
Res. Vondorn
Corbin, 40701
606-528-1361
GP 1602 39

Park, Richard F.
Jucy
Ofc. 1708 Forest Dr.
Corbin, 40701
606-528-6437
Res. 1232 Forest Circle Dr.
Corbin, 40701
606-528-4001
FP 1612 68

Patil, Jagdish S.
Usho J.
Ofc. 1704 Forest Dr.
Corbin, 40701
606-528-2706
Res. 1704 Forest Drive
Corbin, 40701
606-528-8841
U 7011 61

Patil, Usha J.
Jagdish
Ofc. 107 Mitchell St.
Corbin, 40701
606-528-8454
Res. Boptist Hospital
Corbin, 40701
PATH 7011 67

Pitman, Roemer D.
Joyce C.
Ofc. 402 Cumberlond Ave.
Williamsburg, 40769
606-549-2411
Res. 402 Cumberlond Avenue
Williomsburg, 40769
606-549-1421
FP 4106 55

Prewitt, Elmer G.
Wilmo
Ofc. Doctor's Pork
Corbin, 40701
606-528-6969
Res. 1402 Sherwood Drive
Corbin, 40701
606-528-0588
FP 1602 55

Rindani, Arun B.
Shreedevi A.
Ofc. H1 Doctors Park
Corbin, 40701
606-523-1660
Res. 150 Rollo Honk
Corbin, 40701
ORS 7032 55

Sanderlin, Billy E.
Morion D.
Ofc. Doctors Park
Corbin, 40701
606-528-5527
Res. 1207 7th
Corbin, 40701
606-528-1863
OBG 4106 53

Scott, Gene W.
Beverly
Ofc. 210 So. Second St.
Williomsburg, 40769
606-549-1251
Res. Shownee Dr.
Williomsburg, 40769
606-549-2140
FP 4106 62

Seo, Tae-Joon
Ju
Ofc. Rt. 4, Box 182-E
Corbin, 40701
606-528-1112
Res. Route #4, Box 182-E
Corbin, 40701
606-528-6196
R 7603 64

Smith, Keith P.
Betty
Ofc. 100 Keith Dr.
Corbin, 40701
Res. 100 Keith Dr.
Corbin, 40701
OBG 1602 36

Turner, Bobby
Christine
Ofc. 1007 18th St.
Corbin, 40701
606-528-0305
Res. 9 Shodybrook Lone
Corbin, 40701
606-523-1942
IM

Wallace, Jr., Carmel
Jone R.
Ofc. 373 Bold Ruler Trail
Corbin, 40701
606-528-9700
Res. 373 Bold Ruler Troil
Corbin, 40701
PD 1612 75

Weigand, Robert T.
Ofc. P.O. 850
Corbin, 40701
606-528-0305
Res. 1237 Forest Pine
Corbin, 40701
606-528-4361
IM 1602 75

Weisert, Roderick F.
Ofc. Doctors Pork
Corbin, 40701
606-528-6202
Res. 163 Citation Troil
Corbin, 40701
606-528-3677
SU 1612 75

Wells, Billy H.
Pot
Ofc. 601 So. Kentucky St.
Corbin, 40701
606-528-8686
Res. Route 1, Box 2
Woodbine, 40771
606-528-5963
FP 1602 62

Key to COUNTY CODES

AD	ADAIR
AL	ALLEN
AN	ANDERSON
BAL	BALLARD
BAR	BARREN
BAT	BATH
BE	BELL
BOO	BOONE
BOU	BOURBON
BD	BOYD
BRA	BRACKEN
BL	BOYLE
BRT	BREATHITT
BRK	BRECKINRIDGE
BUL	BULLITT
BUT	BUTLER
CLD	CALDWELL (see: Pennyrile)
CAL	CALLOWAY
C-K	CAMPBELL (see: Campbell-Kenton)
C-K	CAMPBELL-KENTON
CRL	CARLISLE
CAR	CARROLL
CTR	CARTER
CSY	CASEY
CHR	CHRISTIAN (see: Pennyrile)
CLK	CLARK
CLA	CLAY
CLN	CLINTON
CR	CRITTENDEN
CU	CUMBERLAND
D	DAVIESS
ED	EDMONSON
EL	ELLIOTT
ES	ESTILL
F	FAYETTE
FLM	FLEMING
FLO	FLOYD
FR	FRANKLIN
FU	FULTON
GAR	GARRARD
GAL	GALLATIN
GRT	GRANT
GRV	GRAVES
GRY	GRAYSON
GRN	GREEN
GRP	GREENUP
HAN	HANCOCK
HRD	HARDIN
HRL	HARLAN
HRS	HARRISON
HRT	HART
HND	HENDERSON
HNR	HENRY
HIC	HICKMAN
HO	HOPKINS
JA	JACKSON
J	JEFFERSON
JES	JESSAMINE
JNS	JOHNSON
C-K	KENTON (see: Campbell-Kenton)
KT	KNOTT
KX	KNOX
LRU	LARUE
LRL	LAUREL
LA	LAWRENCE
LE	LEE
LES	LESLIE
LET	LETCHER
LEW	LEWIS
LIN	LINCOLN
LIV	LIVINGSTON
LO	LOGAN
LY	LYON
MCRA	MC CRACKEN
MCRE	MC CREARY
MCL	MC LEAN
MAD	MADISON
MAG	MAGOFFIN
MRN	MARION
MRL	MARSHALL
MRT	MARTIN
MAS	MASON
MED	MEADE
MEN	MENIFEE
MER	MERCER
MET	METCALFE
MNR	MONROE
MNT	MONTGOMERY
MOR	MORGAN
MU	MUHLENBERG
NL	NELSON
NC	NICHOLAS
OH	OHIO
OL	OLDHAM
OWN	OWEN
OWS	*OWSLEY
PND	PENDLETON
PEN	PENNYRILE
PER	PERRY
PK	PIKE
PO	POWELL
PUL	PULASKI
ROB	*ROBERTSON
ROC	ROCKCASTLE
ROW	ROWAN
RU	RUSSELL
SCT	SCOTT
SH	SHELBY
SMP	SIMPSON
SP	SPENCER
TA	TAYLOR
TO	TODD (see: Pennyrile)
TRG	TRIGG (see: Pennyrile)
TRM	TRIMBLE
U	UNION
WRN	WARREN
WSH	WASHINGTON
WN	WAYNE
WB	WEBSTER
WT	WHITLEY
WF	WOLFE
WD	WOODFORD

*Code with Number of County submitting Membership. If no County listed Code 000-Members at Large.

ALPHABETICAL LIST OF KMA MEMBERS

A

Aaron, Lauis E.—**AD**
Aaron, Oris—**AD**
Aaron, William Stephen—**J**
Abang, Raul S.—**HRD**
Abell, Irvin—**J**
Abell, Jr., Harry D.—**MCRA**
Abrams, Berel L.—**J**
Abshier, W. Mark—**D**
Ackermann, Kurt—**J**
Acland, Rabert D.—**J**
Acland, Sarah—**J**
Acosta, Carazan B.—**KX**
Acosta, Roselia A.—**KX**
Adair, Norman—**OWN**
Adamkin, David H.—**J**
Adams, Billy M.—**J**
Adams, Brenton S.—**J**
Adams, Cyrus E.—**J**
Adams, Garrett—**J**
Adams, James D.—**FLO**
Adams, James E.—**MCRA**
Adams, Kearney R.—**CSY**
Adams, Lundy—**LET**
Adams, Samuel M.—**LRL**
Adams, Theodare L.—**F**
Adams, W. Llayd—**F**
Adams, Jr., William E.—**MCRA**
Adan, Jase R.—**CHR**
Adkins, Brawn L.—**EL**
Adkins, Hugh P.—**J**
Agrawal, Mahesh—**J**
Ahmad, Fazal H.—**HRL**
Ahmad, Waheed—**J**
Ahmadi, Bijan—**J**
Ahnquist, Gary R.—**BL**
Ainsworth, Sr., George E.—**HO**
Air, Clements W.—**K**
Air, Gordan W.—**K**
Akaydin, Mehmet S.—**F**
Akers, Robert H.—**J**
Akhtar, Syed Hasan—**FLO**
Al-Shami, Nadir—**J**
Alberhasky, Robert J.—**J**
Alexander, Alex J.—**WD**
Alexander, Robert N.—**BE**
Alexander, Wallace R.—**HO**
Alfano, Frank M.—**J**
Alford, Earl C.—**HRL**
Algren, John T.—**J**
Allegra, Joseph C.—**J**
Allen, Billy R.—**OH**
Allen, Claude L.—**FLO**
Allen, David T.—**WD**
Allen, Faye G.—**K**
Allen, J. Kenneth—**J**
Allen, J. Timothy—**J**
Allen, James R.—**HRS**
Allen, John D.—**J**
Allen, John M.—**F**
Allen, John R.—**F**
Allen, L. Chase—**F**
Allen, Ralph W.—**PK**
Allen, Richard D.—**J**
Allen, Robert E.—**J**
Allen, William C.—**F**
Allen, William R.—**MAD**
Allen, Jr., Charles E.—**J**
Alley, Rufus C.—**F**
Allnutt, Charles F.—**K**
Allnutt, Richard A.—**K**
Alonso, Andres—**F**
Alt, Daniel B.—**J**
Althaus, Jr., Arthur H.—**J**
Altman, Harry E.—**PK**
Alvarado, Esperanza—**J**
Alvarez, Beda P.—**K**
Alvey, Frank B.—**J**
Alvey, James E.—**J**

Ambach, Jahn W.—**J**
Amin, Mohommad—**J**
Amin, Rojonbhai R.—**J**
Ammon, John D.—**BOO**
Amorocho, Jase M.—**CAR**
Amos, B. Kirtley—**CLD**
Anama, Emmanual—**CLA**
Anderson, Carl A.—**C**
Anderson, Jomes E.—**D**
Anderson, Jomes W.—**F**
Anderson, Jerry E.—**F**
Anderson, Werner W.—**C**
Anderson, William H.—**J**
Anderson, III, Williom B.—**TRG**
Andrews, Billy F.—**J**
Ansel, Jomes R.—**TA**
Angelucci, Ralph J.—**F**
Anneken, Jr., Howord A.—**K**
Ante, Jose P.—**J**
Anvari, Toho S.—**J**
Anzures, Cecilio M.—**J**
Anzures, Humildad T.—**F**
Apesos, Jomes—**F**
App, Fronk E.—**J**
Archer, Roleigh R.—**F**
Arena, Poul J.—**J**
Arguedas, Armando—**J**
Arik, Mehet—**J**
Arla, Mohono R.—**BUL**
Armbruster, William H.—**J**
Armitage, Jomes L.—**K**
Armstrong, Aubrey L.—**MU**
Armstrong, Lyman G—**J**
Armstrong, Poul S.—**HRD**
Arnett, Chorles F.—**FLO**
Arnett, John W.—**J**
Arnn, Edward T.—**J**
Arnold, Marian E.—**HO**
Arnold, Richord W.—**HRS**
Arora, Krishon K.—**J**
Arriola, Ermelindo—**JNS**
Arriola, Pedro—**JNS**
Arrowood, Julia G.—**HRL**
Arroz, Vincent C.—**LET**
Arvin, Orson L.—**ROC**
Ash, Rabert C.—**F**
Ash, Worren H.—**J**
Asher, Bennett N.—**CLK**
Asher, Christine A.—**HO**
Asher, Dovid C.—**BE**
Ashworth, John S.—**BD**
Asriel, Erwin—**BOU**
Asuncion, Forfelito O.—**K**
Asuncion, Juan S.—**HRD**
Atasoy, Erdogan—**J**
Atherton, C. Victor—**J**
Atherton, L. Douglas—**J**
Attum, Abdulla—**J**
Atwell, John R.—**F**
Aud, Richard E.—**J**
Auerbach, J. Keith—**J**
Auerbach, Rabert E.—**FR**
Auerbach, S. Pearsan—**J**
Aus, Robert G.—**F**
Austin, III, F. D.—**MCRA**
Avenido, Antera J.—**HRD**
Avila-Orlandi, Jase A.—**F**
Ayub, Asif—**HRL**
Azzam, Rashi A.—**J**

B

Babbitt, Ann M.—**HO**
Babey, III, Joseph C.—**J**
Bachman, Richord K.—**HO**
Bada, Henrietto—**J**
Badenhausen, Walter E.—**J**
Badrudduja, Syed G.—**FLO**
Bae, Jae-Keun—**C**
Baehler, Richard W.—**F**
Baggett, Teresa Ann—**SCT**
Bailen, Jomes L.—**J**
Bailey, Herold K.—**BD**
Bailey, Rogers Q.—**BL**
Bain, Robert S.—**F**
Baird, Glenn D.—**BAL**
Baird, Glenn F.—**BOO**
Baird, John M.—**BL**
Baird, Thamas H.—**WRN**
Baker, Charles G.—**J**
Baker, Harold W.—**J**
Baker, Jomes G.—**J**
Baker, Jomes W.—**F**
Baker, Richard W.—**J**
Baker, Robert F.—**J**
Baker, Simeon S.—**J**
Baker, Thomas H.—**FR**
Baker, William H.—**J**
Baker, William T.—**J**
Baker, Jr., Glen R.—**WT**
Bakus, Karen S.—**J**
Baldwin, John B.—**F**
Bale, Phillip W.—**BAR**
Ball, Christina F.—**J**
Ball, Cay E.—**D**
Ballard, Joseph A.—**F**
Ballard, Ralph T.—**MER**
Ballard, Ted D.—**F**
Balthrop, John E.—**F**
Baluyot, Agustino A.—**K**
Banchongmanie, Ronachai—**J**
Banerjee, Timir—**J**
Banis, Jr., Joseph C.—**J**
Banks, William V.—**K**
Barber, Geargе C.—**ROW**
Barbie, Ranald N.—**J**
Bard, James W.—**F**
Bark, Joseph P.—**F**
Barker, Denzil G.—**KT**
Barker, Ernest G.—**ROW**
Barker, Gary L.—**BD**
Barlow, Charles A.—**CHR**
Barlow, Fred D.—**J**
Barlow, Ranald G.—**MCRA**
Barnard, W. Winston—**MCRA**
Barnes, Ernest A.—**CLN**
Barnes, Jomes R.—**J**
Barnes, Mory Ann—**K**
Barnes, William E.—**LIV**
Barnett, Fred—**HND**
Barr, Geargе W.—**LRL**
Barr, Jr., James M.—**FR**
Barrett, Dovid L.—**CAL**
Barron, Bernord W.—**J**
Barron, Michael P.—**MAD**
Barrows, George H.—**J**
Barton, Donald C.—**WT**
Barton, P. Bruce—**WT**
Basha, Nabil—**JNS**
Bass, Norman H.—**F**
Bassi, Joseph A.—**MCRA**
Bate, John T.—**J**
Bateman, Robert C.—**BL**
Bates, Jahn C.—**HRD**
Bates, Radney K.—**LIN**
Battah, Emmanuel J.—**CHR**
Bauer, George W.—**HRD**
Bauer, James L.—**ROW**
Baughman, Bronhom B.—**FR**
Baughman, III, John S.—**MER**
Baumgarten, Jomes A.—**D**
Baute, Bernard J.—**MRN**
Bautista, Constancia M.—**J**
Bautista, Fe Leana—**J**
Bean, J. S.—**HRD**
Bean, Jomes R.—**F**
Bean, Robert J.—**J**
Beanblossom, Robert L.—**J**
Beard, Geargе S.—**MU**
Beasley, Lillard F.—**SMP**
Beatty, C. Patrick—**F**
Beatty, Oren A.—**J**
Bechtold, William—**HRL**
Beck, Jomes L.—**HO**
Becker, Michoel D.—**J**
Beckett, Walter F.—**WRN**
Beckmeyer, Jr., Wm. J.—**C**
Becknell, James L.—**CLA**
Becknell, William E.—**CLA**
Becknell, Jr., Wm. E.—**CLA**
Bedell, Kevin—**HO**
Begley, Philip J.—**HRL**
Begley, Williom G.—**WRN**
Behnke, Ernest E.—**BD**
Beilman, Henry J.—**J**
Beilman, Kenneth M.—**J**
Beine, Kathleen L. B.—**MER**
Beineke, Daniel D.—**MAS**
Belhasen, Franklen K.—**JNS**
Belin, Rabert P.—**F**
Belker, Arnold M.—**J**
Bell, Edward E.—**J**
Bell, Jesse B.—**J**
Bell, John P.—**J**
Bell, Richord M.—**F**
Bell, Jr., Hank—**TO**
Bellamy, Geargе R.—**MOR**
Bennett, Durrett C.—**OH**
Bennett, Shelley E.—**ROW**
Bennett, W. Neal—**J**
Bensman, Irvin—**D**
Bentley, Can M.—**PK**
Bentley, Teresa J.—**PUL**
Berg, Horold F.—**J**
Bergman, S. Eric—**J**
Bergner, Robert P.—**J**
Bergsma, Danald R.—**F**
Berman, Gerald—**J**
Berman, Henry I.—**J**
Berman, Robert S.—**BOU**
Bernard, Joe D.—**F**
Bernhard, C. Melvin—**J**
Bersot, Jr., James L.—**J**
Bertolone, Jr., S. J. —**J**
Betts, Gordan D.—**PUL**
Bhatt, Omkor N.—**ED**
Biagtan, Adelina C.—**J**
Bickel, John E.—**D**
Biddle, Robert A.—**WD**
Bieber, Herbert F.—**K**
Bierly, Jr., George R.—**J**
Biggs, Jr., James R.—**BE**
Billington, Charles B.—**MCRA**
Bilotta, Joseph T.—**J**
Binegar, Garry N.—**D**
Binford, R. Bailey—**CAL**
Bingcang, Benigna P.—**F**
Bingham, Roy E.—**J**
Bippert, Curtis E.—**MCRA**
Birenbaum, Georges—**F**
Birkhead, Ben M.—**J**
Birlew, Nicholas—**AD**
Bishop, Alexius M.—**K**
Bishop, John A.—**J**
Bishop, Marvin E.—**CLK**
Bizot, Byron—**J**
Bizot, David H.—**J**
Bizot, William H.—**J**
Black, John S.—**WRN**
Black, Jr., Lowell J.—**PK**
Blackburn, Dwight L.—**MAD**
Blackburn, John P.—**WRN**
Blackburn, Winfrey P.—**FR**
Blackburn, Jr., Glenn K.—**PUL**
Blackburn, Jr., William E.—**F**
Blackstone, Jack C.—**D**
Blackstone, Jr., Jack C.—**D**
Blair, Donold E.—**ROW**
Blair, Earl—**J**
Blair, Murvel C.—**FR**
Blair, Robert A.—**FR**
Blake, Rabert M.—**MAS**
Blakey, Leslie W.—**F**
Blalock, Richard E.—**CAL**
Blalock, William N.—**MCRA**
Bland, Charles L.—**GRY**
Bland, Jack D.—**HND**
Bland, James G.—**J**
Bland, Kirby I.—**J**
Bland, Vivian H.—**HRD**
Blandford, Chorles Henry—**J**
Blandford, Jr., Joseph M.—**J**
Blanford, Arthur T.—**J**
Blanton, Chester M.—**MCRA**
Blaydes, M. Cary—**F**
Blevins, Horald W.—**J**
Blevins, Joseph W.—**J**
Blevins, Phillip K.—**F**
Bloch, Chorles L.—**J**
Bloch, W. Austin—**J**
Block, J. Brodford—**J**
Blodgett, Williom A.—**J**
Bloom, Gerald E.—**J**
Bloss, Bryant—**J**
Blount, Rankin C.—**F**
Blumenreich, Mortin S.—**J**
Boarman, Christopher A.—**F**
Bobys, Stephen M.—**F**
Boeckmann, George B.—**HRT**
Boeh, Daniel H.—**C**
Boerner, Arthur R.—**J**
Boettner, Robert Barney—**F**
Boggess, Joseph R.—**MU**
Boggs, Eli C.—**PER**
Boggs, James G.—**GRP**
Bohle, Charles J.—**MCRA**
Bohman, Bradford—**J**
Bongiorno, Felix J.—**F**
Boom, Jr., Paul—**MCRA**
Booth, Herbert R.—**BOO**
Boram, Lawrence H.—**J**
Bordador, Teodoro—**J**
Borkar, Bhogwant—**J**
Bornstein, Alan M.—**J**
Borodofsky, Jr., T.—**MCRA**
Borsch, Worren W.—**J**
Borst, III, Geargе C.—**BD**
Bose, Sojal K.—**J**
Boso, Jahn E.—**F**
Bosomworth, Peter P.—**F**

Bossart, Borboro A.—**AD**
Boswell, Wolter L.—**F**
Bosworth, N. Lewis—**F**
Bottiggi, Jomes A.—**F**
Bowden, Jr., Mork—**F**
Bowen, Joseph Andrew—**J**
Bowen, R. Stephen—**BUL**
Bowers, Fronk R.—**F**
Bowers, Williom E.—**HRL**
Bowers, Jr., C. Richord—**F**
Bowers, Jr., Morvin A.—**J**
Bowles, Charles F.—**J**
Bowles, Jomes M.—**HO**
Bowling, Edward C.—**MRN**
Bowling, Joseph R.—**J**
Bowling, Mourice—**OWN**
Bowling, R. Eugene—**MAD**
Boyea, Lyle H.—**J**
Bradbury, Jahn William—**LRU**
Bradford, Benjomin F.—**MCRA**
Bradford, Williom R.—**MRL**
Bradley, Herbert C.—**J**
Bradnan, William A.—**J**
Bradshaw, Horald W.—**J**
Brady, Burns M.—**J**
Braen, G. Richard—**F**
Brandstetter, Thomas R.—**LIV**
Brashear, Jomes S.—**MU**
Brashear, Robert F.—**CLK**
Brassfield, Clyde M.—**HRD**
Brassine, Williom F.—**HRD**
Braun, Joseph G.—**C**
Bravo, Joseph J.—**K**
Bravo, Leticia A.—**BAR**
Bravo, Orlonda F.—**BAR**
Bray, Gory T.—**F**
Breeding, Rabert B.—**WN**
Brennan, III, Jomes M.—**FR**
Brewer, Jomes H.—**BUL**
Brewer, John R.—**HO**
Brewer, McHenry S.—**J**
Brewer, Wolter R.—**F**
Brice, Chorles T.—**J**
Brigance, Williom H.—**MCRA**
Briggs, Suson E.—**J**
Brill, Joseph B.—**J**
Brindley, Miltan L.—**BRA**
Briones, Fe Nueso—**J**
Briones, Valtoire C.—**J**
Briscoe, C. Williom—**WT**
Brock, Lowrence O.—**TO**
Brockman, Edward J.—**J**
Broderson, Jahn P.—**FR**
Brodsky, Stuort L.—**GRV**
Brogan, Jahn W.—**K**
Brohm, Chorles M.—**J**
Bronner, Irvin E.—**J**
Brooks, Babby J.—**TA**
Brooks, Corroll C.—**WRN**
Brooks, Williom H.—**F**
Broudy, Bruce C.—**F**
Brower, Thomos D.—**F**
Brown, Buster F.—**FR**
Brown, Chorles M.—**NL**
Brown, Collins D.—**MCRA**
Brown, Dovid E.—**J**
Brown, Dovid L.—**F**
Brown, Eric—**HO**
Brown, Morian G.—**F**
Brown, R. Kendoll—**SCT**
Brown, Randall S.—**HND**
Brown, Timothy C.—**SCT**
Brown, William H.—**BRK**
Brown, Jr., Monuel—**J**
Browne, Philip T.—**J**
Bruce, Williom M.—**MCRA**
Bruce, III, Charles O.—**J**
Bruce, Jr., Chorles O.—**J**
Brueggemann, Carl J.—**K**
Bruning, Walter O.—**J**
Bryant, Charles G.—**J**
Bryant, Glenn W.—**J**
Bryant, J. Ray—**J**
Bryant, Williom H.—**BAR**
Bryant, Jr., Thamsan R.—**F**
Bryson, Jerry M.—**HRL**
Bucayu, Jr., Nemesia—**J**
Buchanan, Bernord J.—**HO**
Buchanan, Jerry B.—**J**
Buchele, Eorl S.—**BRK**
Buchino, John J.—**J**
Buckley, Geargе F.—**PK**
Buller, Paul H.—**LET**
Bumgardner, J. Samuel—**J**
Bunch, Edwin L.—**F**
Bundy, Vernan—**J**
Bunnell, Thamas E.—**K**
Bunting, Dewey L.—**J**
Bunting, Jahn L.—**J**
Buono, Fronk L.—**WRN**
Burchell, Delanthany—**K**
Burchell, Jr., Eugene J.—**K**
Burchett, Tray L.—**ROW**
Burckardt, Rabert J.—**J**
Burgess, Clyde A.—**BD**
Burgess, Jerold M.—**MCRE**
Burian, Fronk J.—**PK**
Burke, Doniel W.—**J**
Burke, John H.—**F**
Burke, Thamos F.—**J**
Burke, Timathy N.—**J**
Burke, Winstan L.—**F**
Burkhart, Robert C.—**F**
Burkhart, Stephen—**LIV**
Burkhart, William K.—**F**
Burnett, Jr., Clem F.—**GRV**
Burnette, George E.—**WF**
Burris, Jahn C.—**MCRA**
Burrow, Waady G.—**MCRA**
Burton, Joy Mike—**MNT**
Burton, Jeffrey K.—**J**
Buschemeyer, Jr., Wm. C.—**J**
Bushart, Glynn F.—**FU**
Bushart, Robert W.—**FU**
Bushey, Horold L.—**KX**
Bushong, Williom D.—**D**
Bushong, Williom R.—**MNR**
Buten, Robert E.—**C**
Buttermore, Willord M.—**WT**
Butterworth, Jone R.—**J**
Bux, Mador—**BL**
Bux, Shokeelo P.—**BL**
Bynum, Gus A.—**SCT**
Byrd, Robert D.—**D**
Byron, Robin A.—**BAT**

C

Cabaltica, Restituta M.—**JES**
Cabuay, Bienvenido A.—**BE**
Caffrey, P. Raphael—**F**
Caisley, Ion J.D.—**F**
Caizzi, Kothleen A.—**LET**
Caldroney, Rolph D.—**F**
Caldwell, Horry G.—**BL**
Caldwell, Joseph—**F**
Caldwell, Jr., Chorles E.—**BOO**
Calhoun, Neol—**CHR**
Calico, Forrest W.—**K**
Callahan, Edword L.—**J**
Callaway, Robert G.—**J**
Callen, Jeffrey P.—**J**
Callis, Jomes H.—**D**
Campbell, Corey W.—**MCRA**
Campbell, Mork R.—**HO**
Campbell, Peter C.—**J**
Campbell, Thomas E.—**J**
Campbell, Jr., Aubrey G.—**TO**
Campomanes, Ildefanso A.—**J**
Canan, E. Deon—**J**
Canfield, Baurban E.—**J**
Canlas, Nael D.—**HND**
Cantley, Danold A.—**HND**
Cantor, Howord L.—**J**
Cantrill, Jomes C.—**SCT**
Caplinger, Carl B.—**CHR**
Cardenas, Glenn D.—**MAS**
Carloss, Horry W.—**MCRA**
Carlson, Jr., John A.—**J**
Carney, William M.—**HRD**
Carnighan, Rabert H.—**J**
Carothers, Jomes E.—**D**
Carr, Corter B.—**FR**
Carrasquer, Gasper—**J**
Carroll, Michoel G.—**J**
Cartaya, Morio W.—**J**
Carter, George P.—**LA**
Carter, James E.—**MNR**
Carter, Lila H.—**J**
Carter, Tim Lee—**MNR**
Casey, J. Potrick—**HO**
Casey, John J.—**J**
Cash, Jr., Rolph L.—**CLD**
Cash, Sr., Rolph L.—**CLD**
Caso, Williom D.—**HRD**
Casper, Narvin L.—**J**
Casper, R. Burke—**J**
Cassady, Bollord W.—**PK**
Cassidy, John L.—**K**
Castillo, Julian V.—**HRS**
Castle, Eugene A.—**HO**
Cato, Alon D.—**AD**
Caton, John C.—**FR**
Catron, Frank H.—**WT**
Caudill, C. Louise—**ROW**
Caudill, W. Neville—**J**
Cave, Ray A.—**GRY**
Cawood, Charles David—**BE**
Cawood, Wolter L.—**BD**
Cecil, Frederick J.—**NL**
Cecil, Somuel E.—**PO**
Cecil, III, Bennet D.—**BL**
Cecil, Jr., Jahn T.—**MCRA**
Cecil, Jr., Joseph R.—**J**
Celletti, John K.—**J**
Chalothorn, Norong—**FLO**
Chambers, Henry F.—**TA**
Chambliss, Rabert B.—**BRK**
Chan, Shiu-Kee—**PER**
Chandler, Jahn D.—**MRL**
Chaney, Geargе R.—**PER**
Chaney, Glenn S.—**MCRA**
Chaney, Herbert—**HO**
Chaney, Solly H.—**MCRA**
Chaplin, Mark S.—**HRD**
Chaplin, Jr., Edword R.—**J**
Charasika, James D.—**J**
Charette, Raymond—**CAL**
Chase, Sheldon—**J**
Chatham, Danald—**SH**
Chaudhri, Nanihol S.—**J**
Chaudhry, Aftab A.—**J**
Chavez, Estrello—**CHR**
Cheatham, Geargе C.—**GRN**
Cheatham, Jr., Wm. C.—**J**
Chen, Julia—**J**
Chenault, Horvey—**J**
Cheng, Samuel H.—**J**
Cherian, Ponnottu—**J**
Cherian, Sorammo—**J**
Cheshire, Jr., Jahn C.—**FR**
Childers, James—**J**
Childers, Sora J.—**J**
Childers, Williom E.—**WD**
Chilukuri, Mahon—**HO**
Chin, Hang W.—**F**
Chism, Ranold G.—**J**
Chmiel, Stonley S.—**J**
Cholera, Vinoobhoi M.—**C**
Christian, Elbert G.—**J**
Christopherson, Wm. M.—**J**
Chu, Ann Marie—**J**
Chu, Coleb H.—**CLA**
Chu, Priscilla K.—**CLA**
Chua, Carazan N.—**JNS**
Chumley, Willard F.—**MCRA**
Chung, E. Pya—**OH**
Chuong, Tuang V.—**J**
Church, Stephen H.—**J**
Churney, Alvin M.—**J**
Chutkow, Lee R.—**J**
Ciliberti, Angela A.—**J**
Clanton, Jerry N.—**J**
Clapp, Williom H.—**HO**
Clardy, Delmas M.—**CHR**
Clark, Arch B.—**MAD**
Clark, Corl T.—**F**
Clark, Chorles D.—**CAL**
Clark, Donny M.—**PUL**
Clark, Gerold—**HO**
Clark, Orville S.—**J**
Clark, Randall—**PUL**
Clark, Ritchie L.—**D**
Clarke, Jomes A.—**HO**
Clarke, Williom F.—**F**
Claugus, Clarence E.—**J**
Clawson, D. Koy—**F**
Clay, John B.—**FR**
Clay, Jr., Herbert L.—**J**
Clear, Rabert C.—**C**
Click, C. Glen—**LIN**
Clifford, Angelo L.—**WD**
Cloar, Rabert B.—**HO**
Cloys, Dan E.—**MAD**
Co, Lucia G.—**K**
Coates, Frederick H.—**F**
Coats, Thomos F.—**F**
Coblens, Harry C.—**SCT**
Cody, Jack E.—**BL**
Coe, Wolter S.—**J**
Coffman, Selby E.—**HO**
Coghe, Dovid W.—**F**
Cohen, Burtan J.—**J**
Cohen, Narmon K.—**J**
Cohen, Stuort P.—**J**
Colbert, Morgon R.—**J**
Colburn, Williom J.—**MRL**
Colburn, Williom R.—**MRL**
Cole, Jahn R.—**F**
Cole, Julion B.—**HND**
Cole, Norman M.—**J**
Coleman, Everett S.—**MCL**
Coleman, Lee Alan—**J**
Coleman, Timothy L.—**F**

Colley, Richord L.—**GRV**
Collier, Henry S.—**J**
Collier, Normon G.—**J**
Collier, Ronold N.—**J**
Collings, Jock C.—**D**
Collins, Jahn W.—**F**
Collins, Michoel J.—**ED**
Collis, Stanley W.—**J**
Collis, William J.—**F**
Colvin, David S.—**HRD**
Combs, Arnald B.—**F.**
Combs, Ballard F.—**F**
Combs, Chorles R.—**F**
Combs, Jomes L.—**K**
Combs, Lyndan F.—**PER**
Combs, Poul S.—**F**
Comer, J. Williom—**J**
Comer, Milton—**J**
Compton, David Alan—**HO**
Cona, Joseph P.—**J**
Conlan, James K.—**CHR**
Conley, Jae G.—**J**
Connelly, Edword W.—**BD**
Conner, Eugene H.—**J**
Conner, William T.—**BD**
Conners, Jerry W.—**C**
Connerth, James E.—**CHR**
Conrad, Roberta L.—**MCRA**
Conway, Peter M.—**J**
Conyer, William R.—**LIV**
Cook, Charles E.—**CAL**
Cook, Christine L.—**J**
Cook, Kenneth G.—**MCRA**
Cook, Lorry N.—**J**
Cook, Todd M.—**C**
Cook, William B.—**FLO**
Cook, III, Clintan C.—**J**
Cooke, Samuel L.—**HRL**
Cooper, James K.—**F**
Cooper, John G.—**HRS**
Cooper, John I.—**TRM**
Cooper, Rabert M.—**F**
Cooper, Samuel L.—**J**
Cooper, Sidney P.—**F**
Cooper, Wilford L.—**F**
Cooper, William L.—**F**
Cooper, Jr., Carl—**TRM**
Coordes, Kathleen M.—**F**
Cope, Jack W.—**HRL**
Copeland, G. Nelson—**F**
Copley, II, Robert W.—**J**
Coppedge, Ruth M.—**CHR**
Corales, Enedino R.—**F**
Corbitt, Phyllis J.—**JES**
Cordero, Jose M.—**MOR**
Cornett, Cathryn V.—**CSY**
Cornett, Rabert E.—**BRT**
Cornish, Allen L.—**F**
Cornish, III, Allen L.—**F**
Coronel, Abel J.—**J**
Coronel, Emmanuel R.—**J**
Corpus, R. P.—**HO**
Corum, Joonne D.—**BE**
Corwin, Hol Michael—**J**
Cosio, Julio Elio—**J**
Cost, Guinn S.—**CHR**
Costich, Timothy D.—**F**
Costigan, Daniel G.—**J**
Cotthoff, Jahn E.—**CHR**
Counts, Edward F.—**F**
Courtenay, Thomas A.—**J**
Cowan, Jahn L.—**J**
Cowan, Jr., Walter E.—**PER**
Cowen, David L.—**F**
Cowherd, Colby N.—**F**
Cowherd, Harry J.—**FR**
Cowles, Mory B.—**F**
Cox, David M.—**J**
Cox, Frederick G.—**PK**
Cox, James B.—**CHR**
Cox, Rondy—**D**
Cox, Rex A.—**J**
Cox, Robert D.—**J**
Cox, Warren M.—**J**
Cox, William H.—**BOU**
Coy, Fred E.—**J**
Coy, III, James T.—**MAD**
Coyer, Bruce H.—**F**
Crabbs, Jerry R.—**K**
Crabtree, Carsan E.—**J**
Crabtree, Clovis A.—**J**
Crabtree, Garrett M.—**J**
Crabtree, Kenneth R.—**MNR**
Craig, Cedric—**LET**
Cramer, Jahn R.—**WT**
Crary, Paul D.—**C**
Crase, Chorles E.—**LIN**
Crase, James D.—**PUL**
Crawford, Ben W.—**F**
Crawford, E. Philip—**F**
Crawford, Frank B.—**MCRA**
Crawford, Kenneth P.—**J**
Craycraft, Larry B.—**BD**
Creech, Jr., John L.—**J**
Creevy, Joseph A.—**K**
Cressman, Jr., Frederick—**J**
Crews, James P.—**BAR**
Crick, Larry G.—**HND**
Crisologo, Lareta L.—**HRL**
Crisostomo, Rufino F.—**KX**
Crocker, Mox A.—**F**
Croft, Rachel G.—**CHR**
Cronen, Michael R.—**J**
Cronen, Jr., Poul W.—**J**
Cronin, John D.—**F**
Cropper, Wendy G.—**F**
Crosby, Robert T.—**WRN**
Crossen, Philip S.—**F**
Crouch, Richord H.—**CAL**
Crowder, II, Bennett L.—**CHR**
Crutcher, Douglas C.—**J**
Crutcher, Richord R.—**F**
Culbertson, Jr., Wm. H.—**MCRA**
Cull, Leightan L.—**FR**
Cull, D. Abbett—**OWN**
Cullen, Danal S.—**K**
Cullen, Jahn W.—**F**
Culley, Gregory A.—**J**
Cullum, Albert G.—**BE**
Cummings, Norman A.—**J**
Cummings, III, Edward C.—**J**
Cummins, Dewey E.—**BRA**
Cummins, Jr., C. E.—**MAS**
Cundiff, Jr., James R.—**BUL**
Cunningham, Guy C.—**BD**
Cunningham, Melvin D.—**F**
Curd, Philip R.—**JA**
Curran, Kevin L.—**J**
Curry, James W.—**J**
Cymbala, Bohdan—**HND**
Cyran, Stanley J.—**J**

D

Dade, James R.—**CHR**
Dageforde, David A.—**J**
Dahhan, Abdulkader—**HRL**
Dahlenburg, David R.—**F**
Dalton, W. Lisle—**F**
Daly, Wendy C.—**J**
Dalzell, Jr., Rabert C.—**D**
Dame, Richard W.—**J**
Damron, Jomes R.—**F**
Dane, Rabert—**WT**
Daniel, Fielding W.—**J**
Daniel, William T.—**WT**
Daniel, Jr., Kearney B.—**BL**
Daniels, Charles A.—**FR**
Daniels, Charles Bishop—**BD**
Daniels, William C.—**K**
Danneman, Williom G.—**K**
Darnell, Matthew C.—**F**
Darnell, Jr., John H.—**K**
Darpel, John A.—**K**
Datta, Robin—**J**
Daud, Mian B.—**MU**
Daud, Shahnaz K.—**MU**
Daugherty, Horry R.—**BOO**
Daugherty, Joseph F.—**BOO**
Daugherty, Karen H.—**J**
Daugherty, Michael E.—**F**
Daus, Arthur T.—**J**
Dave, Udaykant V.—**HO**
David, Alan K.—**F**
David, Douglas—**J**
Davidson, Chester L.—**J**
Davies, Theodore E.—**MCRA**
Davila, Luis E.—**C**
Davis, Bruce C.—**J**
Davis, Charles K.—**MCRA**
Davis, Charles P.—**J**
Davis, Edwin R.—**CHR**
Davis, Edwin T.—**MCRA**
Davis, Gary Wade—**HO**
Davis, Harold Q.—**J**
Davis, Howell J.—**D**
Davis, James W.—**J**
Davis, Kent L.—**F**
Davis, Lowrence A.—**J**
Davis, Mary Lang—**J**
Davis, Owen L.—**AL**
Davis, Robert—**HND**
Davis, Russell H.—**PK**
Davis, Terry Lee—**J**
Davis, Jr., William E.—**BOU**
Davis, Jr., Williom G.—**J**
Dawoud, Samir—**HRL**
Dawson, John E.—**C**
Dawson, M. Allen—**F**
Dawson, Martha P.—**J**
Dawson, Royce E.—**D**
Dawson, Jr., James D.—**WT**
Day, Gustavo D.—**HND**
Day, Jr., Thomas G.—**J**
De Bandi, Harry O.—**HO**
De Carvalho, Roberta M.—**K**
De la Rosa, David M.—**PK**
de Soyza, Neil D. B.—**HND**
Dean, James—**J**
Dean, Melvin L.—**F**
Dean, Wynant—**J**
Dedman, Elizabeth B.—**J**
Dedman, Nick G.—**MER**
Dedman, Thomas C.—**MER**
Dee, Michael W.—**J**
DeLong, Henry F.—**J**
Demos, Jan S.—**F**
Dempsey, Jerry E.—**C**
DeMunbrun, Danne O.—**J**
DeMunbrun, Truman W.—**J**
Denham, Harry C.—**MAS**
Denham, Mitchel B.—**MAS**
Denham, Rolph M.—**J**
Denison, Vinna Rhea—**HO**
Dennison, Joseph R.—**MAS**
Dent, Paul L.—**J**
Denton, Clarence E.—**J**
Denton, Sandro C.—**J**
Desai, Suvas G.—**MAD**
DeSimone, Kenneth J.—**GRN**
Devillez, David L.—**MCRA**
Devillez, Elmer E.—**K**
Dew, Joseph M.—**HRD**
DeWeese, Bab M.—**J**
Dewey, Dennis D.—**HO**
Dhanjal, Surjeet S.—**J**
Diamond, Harvey M.—**J**
Diaz, Ranila D.—**MU**
Dick, John M.—**LET**
Dick, Morcus—**J**
Dickerman, Jane—**ROW**
Dickinson, Jahn—**BAR**
Dickinson, Lewis—**BAR**
Dickinson, Lewis G.—**BAR**
Dickinson, Jr., Grady L.—**J**
Dickstein, Herbert—**J**
Dickstein, Leah J.—**J**
Diebold, Donald G.—**J**
Diebold, John C.—**J**
Dienes, James A.—**J**
Dill, Doniel R.—**J**
Dillard, Francis J.—**GRV**
Dillon, Jr., Marcus L.—**F**
DiOrio, Victar J.—**J**
Ditty, Jr., Jack F.—**BD**
Dobbs, Chorles E.—**J**
Dobner, Joseph J.—**FR**
Dobson, Carl—**WRN**
Dochterman, Dorryl L.—**F**
Dockery, Robert W.—**J**
Dodds, Charles R.—**HO**
Dodson, Carlisle V.—**LO**
Dodson, Geargе E.—**HO**
Dodson, James C.—**LO**
Dohn, Anita L.—**K**
Dominguez, Jr., P. R.—**HND**
Domstad, Peggy A.—**F**
Donaldson, Jr., Elvis S.—**F**
Donelson, Jr., Andrew—**WRN**
Donley, James M.—**HO**
Donmezer, Mehmet A.—**PK**
Donnelly, Jahn D.—**F**
Donnelly, Patricio J.—**J**
Donohue, Thamas A.—**F**
Donovan, Arthur J.—**J**
Donovan, Geargе T.—**K**
Dorman, David W.—**J**
Dorroh, Glenn U.—**F**
Dorton, Jr., David H.—**J**
Doughty, Richard E.—**J**
Douglas, Craig H.—**J**
Douglas, David L.—**FR**
Douglas, James B.—**J**
Douglass, Jr., Marian A.—**LRU**
Dowdell, Richard W.—**J**
Dowden, C. William—**J**
Dowden, William L.—**F**
Downing, Jahn E.—**WRN**
Doyle, Geargе F.—**J**
Doyle, Jahn H.—**J**
Dozier, Geargе S.—**F**
Draime, Robert G.—**C**
Drake, Louis A.—**F**
Drake, Jr., Rabert G.—**HO**
Drasin, Geargе F.—**J**

Draus, Jahn M.—**J**
Dreszer, Maises—**J**
Drye, David D.—**J**
Dubick, Marc N.—**F**
Dubilier, Lauis D.—**F**
Dubou, Richard H.—**J**
Dudney, Jerald S.—**FR**
Duff, W. Rexford—**BD**
Dunbar, Elmer E.—**J**
Duncan, Anthany K.—**J**
Duncan, Charles H.—**J**
Duncan, Frank Lewis—**WN**
Dunkelberger, Dale E.—**JES**
Dunlany, Samuel C.—**D**
Duque, Fausta—**J**
Duran, Daniel A.—**J**
Durham, William C.—**J**
Duvall, Victar F.—**GRY**
Dwyer, Jr., George F.—**J**
Dyer, Rabert S.—**J**
Dyson, Lillian L.—**MOR**
Dzenitis, Andrievs J.—**J**

E

Eads, William Stuart—**WT**
Eastham, Mary L.—**MNT**
Eastland, M. Wilsan—**F**
Eastridge, Rabert D.—**MRN**
Eberle, David A.—**CAL**
Eblen, Kenneth M.—**HND**
Eckerle, Jahn E.—**J**
Eckerline, Jr., Charles—**F**
Eddison, Grace—**ROW**
Edds, Gerald G.—**D**
Edds, Sidney P.—**MCRA**
Edelstein, Stephen G.—**F**
Edger, Danald E.—**F**
Edgin, Haward L.—**BAR**
Edmundson, David P.—**MNT**
Edwards, Darwin—**J**
Egan, Thamas E.—**K**
Eggers, Ernest A.—**J**
Ehrie, Jr., Michael G.—**BD**
Ehsan, Mahsen—**J**
Eiferman, Richard A.—**J**
Eilers, Betty Lau—**F**
Eiseman, Walter R.—**K**
Elam, Sandra M.—**J**
Elbl, Francisca—**J**
Eldridge, Jahn C.—**J**
Elicker, Edward R.—**K**
Ellingsen, Narman H.—**F**
Elliott, Edward C.—**F**
Elliott, Marvin M.—**J**
Elliott, Rabert B.—**J**
Ellis, Keith E.—**MRL**
Ellis, Rabert E.—**J**
Ellis, Rudy J.—**J**
Ellis, William C.—**F**
Emberton, Lawrence P.—**MET**
Embry, James C.—**MCRA**
Emslie, Rabert J.—**HO**
England, Gary T.—**MCRA**
Enright, Dennis W.—**J**
Epling, William D.—**MAD**
Escamilla, Antania L.—**K**
Esham, Elwaad—**LEW**
Eskind, Harald G.—**J**
Espanol, Marie Angeles—**PK**
Estanislao, Amada B.—**J**
Estill, George E.—**MAS**
Eubank, Rachel R.—**HRL**
Eubanks, Jr., Samuel G.—**J**
Evans, Carl T.—**F**
Evans, Cynthia M.—**F**
Evans, Donald L.—**J**
Evans, Evalyn G.—**BD**
Evans, James D.—**PK**
Evans, Meredith J.—**BE**
Evans, Orville T.—**F**
Eversole, Charles D.—**K**
Ewing, James A.—**TA**

F

Fadel, Ranald J.—**J**
Fagan, Linda S.—**MAD**
Fairchild, Jahn—**FLO**
Fallazadeh, Hassein—**PUL**
Falls, Ranald E.—**J**
Fant, Rabert D.—**BAR**
Farley, Claude H.—**F**
Farmer, Jahn M.—**J**
Farmer, Kenneth M.—**J**
Farmer, Sidney E.—**ED**
Farnsley, Wesley G.—**J**
Farrell, Earl J.—**C**
Farrell, William F.—**D**
Faul, Clarice R.—**J**
Faulconer, Harald T.—**F**
Faulkner, Jaseph S.—**C**
Faulkner, Rascae—**LIV**
Faurest, Michael—**J**
Faurest, Jr., Jahn O.—**J**
Feitelson, Philip J.—**J**
Fellows, Richard A.—**J**
Ferrell, James L.—**BOU**
Ferriell, Jr., Thamas J.—**HRD**
Ferris, Fred Z.—**J**
Feuss, Jr., Charles—**K**
Fidler, Rabert W.—**FLM**
Fields, Rabert D.—**GRV**
Fine, Lewis—**J**
Fink, Stuart A.—**J**
Fischer, Daane—**F**
Fischer, Karen F.—**J**
Fischer, Kerwin Armand—**J**
Fisher, Charles R.—**HO**
Fisher, James M.—**ROW**
Fisher, Narman S.—**WD**
Fisher, Vaughn L.—**WRN**
Fitts, Jahn O.—**WRN**
Fitzgerald, Barbara A.—**J**
Fitzpatrick, James F.—**J**
Flanigan, Rabert C.—**F**
Flautt, Jr., James Rabert—**J**
Fleitz, Paul A.—**J**
Fliegelman, Maurice T.—**J**
Flint, Jr., Lewis M.—**J**
Florman, Larry D.—**J**
Flowers, Jeremiah T.—**J**
Flowers, Nancy C.—**J**
Flowers, Samuel H.—**BE**
Floyd, Jahn B.—**F**
Floyd, Richard D.—**F**
Flynn, Michael B.—**J**
Forbes, James S.—**CHR**
Ford, H. W.—**MRL**
Ford, Jerald M.—**BD**
Ford, Lawell E.—**K**
Ford, Narwaad K.—**J**
Forde, Francis A.—**BE**
Fornaris, Fernanda P.—**BAR**
Forrester, Alex M.—**J**
Fort, Darrell L.—**MCRA**
Fortune, Carl H.—**F**
Foshee, Clyde H.—**J**
Fossett, Ralph T.—**ROW**
Foster, Geargе L.—**F**
Foster, Martha M.—**F**
Foster, Michael B.—**J**
Foster, Will S.—**J**
Fowler, Jeffrey P.—**J**
Fowler, Merle W.—**MCRA**
Fowler, Jr., Jaseph F.—**J**
Fox, Gary—**J**
Fox, Jahn M.—**F**
Fox, Mary P.—**PK**
Fragge, Ranald G.—**K**
Fraim, Jerry D.—**JNS**
Francis, Herbert B.—**BOO**
Francisco, Julieta B.—**K**
Franco, Safia M.—**J**
Franks, Charles D.—**ROW**
Franks, Larry C.—**MCRA**
Franz, C. Wayne—**BD**
Franz, Lyle C.—**MAS**
Franz, Mary V.—**J**
Frasher, E. Kenneth—**J**
Frazier, James W.—**CHR**
Frederick, James D.—**MOR**
Fredrick, Geargе T.—**HRS**
Freedman, James R.—**F**
Freeman, James A.—**HO**
Freer, James A.—**J**
Freer, Jahn H.—**F**
French, Samuel L.—**MCRA**
Frey, Walter D.—**F**
Frickman, Dan H.—**C**
Friedeman, Elliatt M.—**C**
Friedlieb, Oskar P.—**BD**
Friesen, Jerald N.—**F**
Fritz, Samuel D.—**MAD**
Fruehwald, Edwin J.—**J**
Frye, Jr., Veryl F.—**PUL**
Fuchs, Gary L.—**J**
Fuenfer, Michael M.—**J**
Fuller, J. Luther—**J**
Fuller, Jr., Elzer T.—**MAD**
Fulmer, Adrian A.—**F**
Fulton, Rabert L.—**HO**
Funk, Jesse T.—**WRN**
Funke, Harald F.—**OL**
Fuqua, Jaseph T.—**CHR**
Fuqua, William R.—**D**
Furcolow, Michael L.—**F**
Furgason, Thamas G.—**D**

G

Gaba, Charles R.—**J**
Gabbard, Mildred B.—**OWS**
Gabbert, William R.—**D**
Gadient, Thamas M.—**HND**
Gaines, Scatt—**HO**
Gaines, Jr., Frank M.—**J**
Gajera, Ratilal G.—**CHR**
Galla, Patrick P.—**J**
Gallo, Thamas A.—**HO**
Gamboa, Renee L.—**J**
Gamel, Jahn W.—**J**
Garamy, Jr., Frank—**K**
Garcia, Daniel P.—**J**
Garcia, Manuel S.—**GRP**
Garden, Jahn W.—**F**
Gardner, Francis T.—**J**
Gardner, Hayt D.—**J**
Gardner, Neven Jahn—**F**
Gardner, Richard—**J**
Gardner, Richard W.—**BD**
Garfinkel, Lester S.—**J**
Garner, Jahn R.—**CHR**
Garon, Max L.—**J**
Garrastazu, Jarge—**CAL**
Garretson, Henry D.—**J**
Garrett, Marris M.—**K**
Garrison, Katherine P.—**J**
Garrison, Richard N.—**J**
Garst, Garland R.—**BAR**
Garvin, Ranald M.—**J**
Gataky, Geargе J.—**J**
Gates, Darathy G.—**MAD**
Gauld, Jahn R.—**MED**
Gaurano, Rasalie M.—**MAG**
Gauri, Kamla—**J**
Gavin, Michael P.—**LIV**
Gay, James G.—**F**
Gaynor, Danal D.—**K**
Gearhart, Elmer A.—**D**
Gearhart, Jahn P.—**J**
Gedmark, Jahn I.—**J**
Gee, William F.—**F**
Geeslin, Lais F.—**J**
Geevarghese, Kunnathu P.—**J**
Gehring, Samuel W.—**FLM**
George, Anthany—**J**
George, Danald I.—**F**
George, Eli J.—**MRN**
George, Salem M.—**MRN**
Gerald, III, Paul E.—**HRD**
Geren, Jack W.—**F**
Gergen, Jahn A.—**FR**
Gerson, Kenneth L.—**F**
Gettelfinger, Ralph A.—**J**
Gettelfinger, Wilfred C.—**J**
Ghali, Nabil N.—**C**
Ghazi, Cyrus—**J**
Ghazi, Darius—**J**
Ghazi, Freidaan—**J**
Giannini, Frank P.—**CLD**
Giannini, J. Thamas—**J**
Giannini, Jack Thamas—**CHR**
Gibson, Elvin T.—**J**
Gibson, Kermit D.—**PK**
Gibson, Miles K.—**FLO**
Gibson, Ray A.—**BAR**
Gibson, Smith H.—**K**
Gibson, William L.—**HO**
Gierlach, Zygmunt S.—**F**
Giese, Frank W.—**C**
Giesel, Lauis O.—**J**
Gilbert, Geargе F.—**AN**
Gilbert, James T.—**WRN**
Gilbert, Jr., Jahn F.—**PER**
Gilbert, Sr., Wendell N.—**D**
Gill, C. Richard—**F**
Gill, Stephen Bayd—**KX**
Gillespie, Harald R.—**LET**
Gillespie, William H.—**J**
Gilliam, David T.—**MCRA**
Gilliam, M. Randalph—**F**
Gillim, Dauglas L.—**J**
Gillingham, Paul M.—**K**
Girardet, Raland E.—**J**
Givens, Gary D.—**MU**
Gladstein, Mark O.—**J**
Glaser, Nichalas W.—**J**
Glazer, Narman—**J**
Gleason, Jahn R.—**J**
Gleis, Linda H.—**J**
Glenn, Jahn P.—**LO**
Glover, Michael W.—**BL**
Gochoel, Jeffrey D.—**C**
Goddy, Leanard A.—**J**
Godfrey, William J.—**HRD**

Goebel, Ranald G.—**J**
Goldberg, John W.—**CAL**
Goldberg, Harry—**J**
Goldberg, Lawrence G.—**J**
Golde, Horry R.—**J**
Golden, Abner—**F**
Golden, Jomes S.—**BE**
Golder, Philip—**BOO**
Golder, Sylvan A.—**K**
Goldin, Albert G.—**J**
Goldman, Martyn A.—**J**
Goldsborough, John N.—**J**
Goldstein, David H.—**J**
Goldstein, Isadore—**J**
Goldstein, Joseph L.—**J**
Goli, Venkateswara R.—**PER**
Goode, Lyndon S.—**CHR**
Goodenow, Thomas J.—**F**
Goodin, C. Dale—**WD**
Goodin, Robert R.—**J**
Goodin, Thomas L.—**HRL**
Goodman, R. Michael—**GRT**
Goodman, Robert P.—**F**
Goodwin, J. Roger—**WRN**
Goodwin, Peter D.—**K**
Goodwin, Robert A.—**WRN**
Gopinath, D. K.—**J**
Gordinier, John D.—**J**
Gordon, Abraham M.—**J**
Gordon, Armond T.—**J**
Gordon, John M.—**MAD**
Gordon, Samuel S.—**J**
Gordon, Wendell E.—**MRL**
Gossman, G. William—**J**
Gossman, M. Douglas—**NL**
Gott, **Jr.**, John R.—**J**
Gould, Richard A.—**J**
Graff, Michael—**F**
Gragg, Logan—**F**
Graham, Jerry M.—**J**
Graham, **III**, S. Lyle—**J**
Granacher, Robert P.—**F**
Grantham, Everett G.—**J**
Graul, William J.—**WD**
Graulich, Kenneth B.—**F**
Graves, Edward C.—**J**
Graves, Harold B.—**J**
Graves, Stuart—**J**
Gray, Helen M.—**J**
Gray, **Jr.**, Laman A.—**J**
Gray, Laman A.—**J**
Gray, **Sr.**, William R.—**J**
Green, Gordon L.—**J**
Green, James W.—**J**
Green, Milton M.—**CHR**
Green, Murphy H.—**HRL**
Green, Richard O.—**WRN**
Green, Thomas L.—**CAL**
Green, **Jr.**, Lawrence P.—**WRN**
Greenberg, Richard A.—**J**
Greenberg, Robert B.—**J**
Greene, George G.—**F**
Greene, John F.—**EL**
Greene, Michael D.—**EL**
Greene, R. Glenn—**D**
Greene, **Jr.**, John W.—**F**
Greenwell, Bernard D.—**HRD**
Grefer, Michael A.—**C**
Gregory, Allen H.—**PUL**
Greiner, Alsan L.—**K**
Greiver, S. Philip—**J**
Grider, Roger D.—**J**
Grider, **Jr.**, Paul C.—**J**
Griffen, Ward O.—**F**
Griffin, Dovid W.—**J**
Griffin, Larry P.—**J**
Griffin, Robert J.—**F**
Griffith, Gary L.—**F**
Griffith, George W.—**ROC**
Griffith, J. Susan—**F**
Grimaldi, Manuel—**J**
Grimes, David L.—**MU**
Grimes, **Jr.**, Allen E.—**F**
Grino, Agripina D.—**JNS**
Grise, Richard F.—**WRN**
Groff, Diller B.—**J**
Grogan, Edwin L.—**MCRA**
Grogan, Michael J.—**BOO**
Gross, Doratheo H.—**OH**
Grosser, Timothy T.—**MAS**
Grover, John W.—**C**
Grumbles, Cecil L.—**J**
Grumley, Paul J.—**MCRA**
Guarnaschelli, John J.—**J**
Gudex, Thomos V.—**J**
Guerrant, Edward O.—**CLK**
Guerrero, Elmer M.—**J**
Guerrero, Filipinas—**J**
Guerrero, Helen Q.—**J**
Guiglia, Theodore N.—**F**
Guiler, J. Michael—**F**
Guindi, Samir A.—**HRL**
Gulley, James G.—**BL**
Gultekin, Muharrem—**J**
Gumbert, George M.—**F**
Gunn, John Curtis—**C**
Gushard, Robert H.—**J**
Gussler, Charles G.—**BD**
Gutgsell, Terence L.—**F**
Gutierrez, German—**MCRA**
Gutierrez, Rosa B.—**K**
Gwinn, Frank W.—**BD**
Gwinn, **Jr.**, James S.—**MCRA**

H

Haas, Christopher T.—**LET**
Haas, Joseph F.—**C**
Haas, Roger A.—**C**
Hacker, William D.—**WT**
Haddad, Rolando I.—**J**
Hadley, Fred—**F**
Haeberle, Clorence I.—**GRP**
Haeberle, Glenn—**BD**
Haeberle, Mark G.—**BD**
Hafendorfer, Daniel L.—**J**
Hafendorfer, Kenneth A.—**J**
Hafner, John N.—**J**
Hagan, Herbert H.—**J**
Hagan, John Campbell—**F**
Hagan, Thomas W.—**J**
Hagen, Michael D.—**F**
Hager, W. David—**F**
Hagihara, Patrick F.—**F**
Haick, Edward M.—**J**
Halbert, Allan D.—**FLO**
Halbleib, Ross A.—**WT**
Halcomb, Francis J.—**AL**
Hale, Joan R.—**J**
Haley, William B.—**MCRA**
Hall, Amos—**HRD**
Hall, C. Noel—**WD**
Hall, D. P.—**J**
Hall, John M.—**AL**
Hall, Larry L.—**GRV**
Hall, Lan C.—**JNS**
Hall, Lyman S.—**TA**
Hall, Mary A.—**FLO**
Hall, Maurice M.—**JNS**
Hall, Michael M.—**TA**
Hall, Paul B.—**JNS**
Hall, Philip L.—**F**
Hall, Robert A.—**JNS**
Hall, Ranald Douglas—**PK**
Hall, Tom E.—**WRN**
Hall, William P.—**MCRA**
Hall, William W.—**D**
Hall, Wreno M.—**HRD**
Hallau, Dorrell L.—**K**
Haller, Harold D.—**J**
Hamberg, Morcelle—**J**
Hambley, William C.—**PK**
Hamburg, Joseph—**F**
Hamilton, Horry A.—**WT**
Hamilton, James E.—**J**
Hamilton, Michael T.—**J**
Hamilton, Richord A.—**WSH**
Hamilton, Ronald D.—**F**
Hamilton, Thomas E.—**F**
Hamilton, William B.—**BUL**
Hamm, Robert W.—**SH**
Hamm, Ronald J.—**J**
Hamman, Jack L.—**HO**
Hammons, James W.—**F**
Hammons, Stanley—**F**
Hamner, Danold L.—**BL**
Hamon, Allen J.—**NC**
Hamon, Andrew R.—**CLK**
Hancock, Jomes K.—**J**
Hand, Edward K.—**HRD**
Handelman, Cathryn C.—**J**
Handelman, Nathon—**J**
Handley, William R.—**HRD**
Hanekamp, Edwin H.—**D**
Hanes, Mervel V.—**J**
Hanking, Williom H.—**FR**
Hanley, Michael J.—**F**
Hanley, William J.—**J**
Hanson, Michael B.—**F**
Harbrecht, Phil J.—**J**
Hardaway, Julian R.—**MED**
Hardebeck, Chorles J.—**K**
Harding, Calvin R.—**J**
Harding, Dannan B.—**F**
Hargadon, Charles M.—**J**
Hargett, Herbert P.—**J**
Harkess, James W.—**J**
Harkness, Joseph C.—**F**
Harlowe, Stuart—**J**
Harned, John W.—**CHR**
Harrell, Frank W.—**J**
Harris, Albert B.—**J**
Harris, Bill H.—**F**
Harris, Charles R.—**MAD**
Harris, Henry S.—**WRN**
Harris, J. Kenneth—**J**
Harris, Mortin J.—**J**
Harris, Walter D.—**F**
Harris, Williom D.—**J**
Harrison, Alvin R.—**BL**
Harrison, Harold L.—**J**
Harrison, John N.—**PUL**
Harrison, John W.—**BD**
Hart, Jomes C.—**CAL**
Hart, Jerry T.—**CHR**
Hart, Vernan F.—**F**
Hart, William G.—**CAL**
Hart, **Jr.**, James C.—**CAL**
Harting, **Jr.**, John E.—**J**
Harty, James I.—**J**
Harvey, Daryl P.—**BAR**
Hast, Robert L.—**D**
Hatam, Ahmod—**J**
Hatcher, Ronald L.—**WRN**
Hatfield, Donny R.—**HO**
Hatfield, Stephonie R.—**HO**
Hatfield, William D.—**BRK**
Haugh, Donold C.—**GRV**
Haugh, Robert M.—**MCRA**
Hausladen, Siegfried L.—**K**
Hauswald, Kenneth R.—**BD**
Havelda, Christopher J.—**D**
Havens, Dennis L.—**F**
Hawkins, Jomes M.—**MCRA**
Hawn, Williom F.—**J**
Hay, Floyd B.—**CLN**
Hayden, Roymond E.—**KX**
Hayden, Violetto T.—**KX**
Hayden, Williom G.—**D**
Hayes, Oscor J.—**J**
Hayes, Roy H.—**J**
Hayman, Mary L.—**J**
Haynes, Douglos M.—**J**
Haynes, **Jr.**, Horald C.—**F**
Hays, Talmadge V.—**BE**
Haywood, Kenneth P.—**HO**
Hazlett, Claude C.—**J**
Healy, Mark H.—**J**
Hearne, Michael J.—**HO**
Heavern, Thamas L.—**C**
Hechema, Cherif E.—**MAD**
Hedges, **Jr.**, Houston—**J**
Hedrick, James A.—**NL**
Heimbrock, Robert G.—**K**
Heine, Burtan M.—**J**
Heine, Karl E.—**HO**
Heine, Lee A.—**J**
Heinicke, Mork H.—**J**
Heinz, Wilbur A.—**LIN**
Heitz, Raymond—**J**
Heizer, William L.—**F**
Hejazi, Masoud S.—**J**
Hellebusch, Arthur A.—**F**
Hellmann, Jack K.—**J**
Hemmer, Jahn A.—**J**
Hemmer, Robert E.—**K**
Hemmings, **Jr.**, Ira L.—**F**
Hench, Richord F.—**F**
Henderson, **III**, A. H.—**F**
Hendon, Jomes R.—**J**
Hendren, Robert D.—**NL**
Hendricks, Douglas L.—**J**
Hendrickson, Robert F.—**BL**
Henkel, Terry W.—**J**
Henry, Carl—**D**
Heringer, **Jr.**, Howard A.—**K**
Hermann, George Joseph—**K**
Herms, Rolph A.—**F**
Hernandez, Alfonso—**J**
Hernandez, Calixto—**FR**
Herrman, Henry C.—**J**
Herrmann, Thomas L.—**HO**
Hersh, Joseph H.—**J**
Hess, Lee C.—**BOO**
Hess, Michael C.—**NL**
Hess, P. Patrick—**J**
Heyburn, Martha Keeney—**J**
Hibbs, **III**, Russell A.—**HND**
Hicks, Brook G.—**MU**
Hicks, Lewis P.—**F**
Hicks, Shelby L.—**J**
Hieronymus, **Jr.**, C. J.—**FLO**
Higdon, Orian Lean—**MCRA**
Higgins, Edwin L.—**K**
Hightower, Edward C.—**F**
Hiland, Steve—**LY**
Hilb, Jeffrey A.—**J**

Hilgeford, Eric J.—**J**
Hill, Byran W.—**HND**
Hill, David L.—**J**
Hill, Jahn S.—**F**
Hill, Keene M.—**HRT**
Hiller, A. Jae—**F**
Hiltz, Lawrence T.—**K**
Hiltz, Stephen W.—**K**
Hines, Cynthio R.—**HO**
Hines, Jahn H.—**BUL**
Hines, Rolph C.—**HO**
Hinkebein, Jomes M.—**J**
Hite, Suzanne M.—**J**
Hitt, Owen K.—**J**
Ho, Mary T.—**F**
Hobbs, Jahn T.—**F**
Hobbs, Thomas G.—**F**
Hodel, Paul E.—**HRL**
Hodge, Kenneth W.—**J**
Hodge, Robert W.—**CLD**
Hodge, Steven J.—**J**
Hodges, Pamelo S.—**K**
Hodsden, Jomes E.—**J**
Hofer, Jeffrey S.—**D**
Hoffman, Charles R.—**J**
Hoffman, Delbert G.—**J**
Hoffman, Phillip H.—**F**
Hoffman, Robert L.—**HO**
Hoffman, Jr., Russell—**J**
Hoffmann, Robert J.—**K**
Hogan, E. Gary—**MET**
Hogancamp, Charles E.—**MCRA**
Hogancamp, Glenn E.—**MCRA**
Holbrook, Paul E.—**BD**
Hollander, Jayne L.—**J**
Hollins, Gordon—**HRL**
Hollinsworth, John L.—**J**
Hollis, John W.—**BD**
Holloway, James B.—**F**
Holmes, Baaker T.—**FR**
Holmes, Eugene M.—**J**
Holmes, J. William—**J**
Holmes, Jahn C.—**C**
Holt, Jack B.—**LO**
Holt, Richard T.—**J**
Holt, Jr., Hamer A.—**J**
Holtgrave, Dorothy E.—**J**
Holtman, James S.—**J**
Holtman, Judy H.—**J**
Holtzapple, Kenneth E.—**J**
Honey, Edward G.—**C**
Hopkins, William E.—**J**
Hopkins, Jr., Sidney F.—**F**
Hopwood, Anne H.—**D**
Horan, Lea G.—**J**
Horton, James K.—**J**
Hoskins, III, Albert B.—**J**
Houchin, Edward G.—**OL**
Houghton, William J.—**J**
Houston, Hal E.—**CAL**
Houston, Hugh L.—**CAL**
Houston, Robert L.—**HNR**
Houston, Wilbur R.—**BOO**
Hoven, Ardis D.—**F**
Howard, Carrall E.—**D**
Howard, Charles D.—**WSH**
Howard, Charles E.—**GRV**
Howard, Danald E.—**FR**
Howard, John D.—**J**
Howard, R. Braoks—**J**
Howard, Robert S.—**HRL**
Howard, Ranald F.—**CHR**
Howe, Allie E.—**C**
Howe, W. Rabin—**J**
Howell, Joyce E.—**J**
Howell, Robert S.—**J**
Howell, Jr., Marshall G.—**HND**
Howell, Jr., Rabert—**J**
Howerton, Christopher B.—**J**
Howerton, Lonnie W.—**J**
Hoy, Jr., William E.—**BD**
Hromyak, Jr., George F.—**FR**
Huang, Tsung-Yau—**J**
Hubbard, Jahn G.—**J**
Hubbard, John S.—**CLK**
Hubbuch, Anthany—**J**
Hubbuch, Sebostion—**J**
Huber, Charles H.—**J**
Hudson, Richard T.—**J**
Huey, Jomes M.—**BOO**
Hugan, Clore C.—**K**
Hughes, Donald G.—**CAL**
Hughes, Elma K.—**J**
Hulett, Paul M.—**J**
Hull, David A.—**F**
Huller, Jr., Ralph F.—**K**
Hulsey, Timothy K.—**WRN**
Hulsman, Philip J.—**J**
Humbert, Jr., Vernan H.—**F**
Hume, Walter I.—**J**
Hummel, Jr., Jahn D.—**J**
Humpert, Joseph H.—**K**
Humphrey, David M.—**J**
Hunsaker, III, John C.—**F**
Hunt, Hilary L.—**MCRA**
Hunt, Jr., Jesse M.—**BAL**
Hunter, Bush Alexander—**F**
Hunter, James B.—**F**
Hunter, Rondolph G.—**BD**
Hunter, Stuart M.—**J**
Hunter, Sylvester G.—**BD**
Huntsman, Harry B.—**GRN**
Hurlocker, James K.—**HRL**
Hurst, Arthur T.—**J**
Hurst, Jr., Arthur T.—**J**
Hurt, O. James—**J**
Hurtiz, Hildebranda R.—**CHR**
Husband, Lowell S.—**MAD**
Hutchins, Lauise F.—**MAD**
Huth, Thomas J.—**K**
Hutsell, Thamas S.—**J**
Hutson, Richord M.—**MCRA**
Hyde, Gardan L.—**F**
Hyden, Alan J.—**FLO**
Hyman, J. Barrett—**J**

I

Ibayan, Daminga M.—**J**
Ice, John F.—**J**
Ignacio, Olegaria J.—**J**
Ikramuddin, Komor J.—**FLO**
Ikramuddin, Syed—**FLO**
Im, Yung K.—**K**
Iqbal, Mahammad J.—**HRD**
Irick, Max—**J**
Irigoyen, Dovid E.—**J**
Irlandez, Didsdado—**J**
Irwin, Jeri P.—**J**
Isaacs, Arthur H.—**J**
Isaacs, Sidney—**F**
Ishkanian, Praspera—**J**
Ison, Claude B.—**LRL**

J

Jaafar, M. Y.—**MCRA**
Jackson, Billy G.—**GRV**
Jackson, Billy J.—**FR**
Jackson, Christman S.—**BL**
Jackson, Elmer H.—**BL**
Jackson, Raymand C.—**F**
Jackson, Richard G.—**BL**
Jackson, Vester A.—**F**
Jackson, William E.—**MCRA**
Jackson, William J.—**J**
Jackson, Williom M.—**BL**
Jackson, Jr., Chrisman—**BL**
Jackson, Jr., Richard G.—**BL**
Jacob, Rabert A.—**J**
Jacobs, Alfred A.—**K**
Jacobs, Jomie J.—**F**
Jacobs, John A.—**C**
Jaegers, Kenneth R.—**J**
Jagdale, Bolkrishan T.—**PER**
Jager, Nirmala M.—**J**
Jakobson, Peeter—**FLO**
James, Gary V.—**CR**
James, Grace M.—**J**
James, III, Thomas—**J**
Jankowski, Dennis A.—**J**
Janney, W. Danold—**K**
Jansen, Carrall A.—**K**
Jansing, C. William—**D**
Janson, Paul J.—**K**
Jarboe, Chorles H.—**J**
Jarboe, Thomas M.—**F**
Jarrett, Robert T.—**FLM**
Jarvis, Angela L.—**D**
Jarvis, James O.—**CLN**
Jarvis, Michoel—**D**
Jasper, Patrick L.—**PUL**
Jasper, Robert Bryant—**PUL**
Jasper, Stephen T.—**PUL**
Jayme, Alberto M.—**PUL**
Jefferies, John D.—**D**
Jelsma, Lawrence F.—**J**
Jelsma, Richord K.—**J**
Jenkins, Douglas H.—**MAD**
Jenkins, Frank M.—**F**
Jenkins, John L.—**HND**
Jenkins, Van R.—**F**
Jennings, Clifford V.—**J**
Jennings, Stephen W.—**K**
Jennings, William N.—**J**
Jensen, Jahan N.—**J**
Jernigan, William R.—**HO**
Jewell, James R.—**J**
John, Becky L.—**PER**
John, Maurice E.—**J**
Johnson, Alan G.—**HO**
Johnson, Alan H.—**HND**
Johnson, Ann H.—**D**
Johnson, George S.—**J**
Johnson, J. Jeff—**MCRA**
Johnson, J. Wesley—**BD**
Johnson, James L.—**HO**
Johnson, John R.—**J**
Johnson, Marshall R.—**HRD**
Johnson, Robert K.—**K**
Johnson, Rabert T.—**OH**
Johnson, Ronald M.—**D**
Johnson, Sandra L.—**J**
Johnson, Walter R.—**MCRA**
Johnson, William M.—**PK**
Johnson, William W.—**J**
Johnson, Jr., Hollis—**J**
Johnson, Jr., James E.—**F**
Johnston, Caleman C.—**F**
Johnston, David H.—**F**
Johnstone, Jahn M.—**MAD**
Johnstone. William H.—**MAD**
Jones, Bayce E.—**LRL**
Jones, Canrad H.—**CAL**
Jones, David E.—**D**
Jones, Erwin A.—**F**
Jones, Hunt B.—**J**
Jones, James B.—**F**
Jones, Janet H.—**F**
Jones, Jahn O.—**GRP**
Jones, Kristie G.—**J**
Jones, Lorry Dale—**SCT**
Jones, Lawrence M.—**J**
Jones, Max P.—**PK**
Jones, Michoel J.—**MCRA**
Jones, Peter H.—**F**
Jones, Raymand E.—**J**
Jones, W. Scott—**J**
Jones, Walter D.—**J**
Jones, Wilfred F.—**HRL**
Jorjani, Monoocheh—**WT**
Jorrisch, Mork Steven—**J**
Jose, Baby—**J**
Joslin, Albert H.—**D**
Joule, William W.—**J**
Joyce, Ellen M.—**FLO**
Jue, Fun Far—**J**
Jugo, Slobodan B.—**MU**
Julian, Bruce A.—**F**
Jurich, Nichalas R.—**FLO**
Jurige, Jahn H.—**J**
Justice, Oren W.—**BD**

K

Kahle, Louis L.—**J**
Kaiser, Robert J.—**J**
Kakascik, Gerald E.—**MCRA**
Kalbfleisch, Sheri A.—**J**
Kamdar, Bharoti A.—**GRV**
Kanovitz, Bob S.—**J**
Kaplan, Mortin P.—**F**
Kaplan, Martin Z.—**J**
Kappes, Paul J.—**C**
Karalakulasingam, Rojo—**J**
Karibo, Jahn M.—**J**
Karim, Farhad—**F**
Karp, David W.—**J**
Karr, Leslie E.—**WT**
Kasdan, Martan L.—**J**
Kasey, Arthur R.—**J**
Kash, Roy M.—**MNT**
Kastan, Louis Bermon—**J**
Kasten, Gregary W.—**F**
Katz, David S.—**J**
Katz, Danald B.—**J**
Katz, Lowell D.—**J**
Kaufmann, Maurice—**F**
Kavanaugh, C. Nicholas—**F**
Kavolus, Joseph M.—**D**
Kawas, Elias E.—**HO**
Kawerk, Jean—**C**
Kayerker, Udoyakumar M.—**J**
Keaney, John M.—**J**
Keeley, Jahn C.—**D**
Keeling, Marie M.—**J**
Keen, Harold—**WRN**
Keeney, Arthur H.—**J**
Keeney, Virginia T.—**J**
Keeton, James M.—**BD**
Keightley, Jomes M.—**MER**
Keightley, Jr., James M.—**F**
Keisler, Rabert L.—**J**
Keith, Willard L.—**MU**
Keller, Williom H.—**FR**
Keller, William K.—**J**

Kelley, Ronold L.—**MCRA**
Kelley, Stephen B.—**PUL**
Kelley, Jr., Thomos A.—**J**
Kelly, Dennis B.—**F**
Kelly, Jomes J.—**K**
Kelly, Prue W.—**CAL**
Kelsay, Jr., Wm. Robert—**WN**
Kelty, Korl C.—**F**
Kemper, F. Worren—**J**
Kemper, Michoel G.—**J**
Kenady, Sr., Doniel E.—**F**
Kennedy, Auddie C.—**HND**
Kerby, Clifford F.—**MAD**
Kernohan, Williom J.—**WRN**
Kerns, Jock D.—**HND**
Khanna, Ashok K.—**BD**
Kho, Eusebio C.—**J**
Khorram, Houshong—**BE**
Kibler, W. Ben—**F**
Kidd, Astro V.—**HRD**
Kidd, Robert C.—**J**
Kidd, Robert R.—**J**
Kielar, Richord A.—**F**
Kiesel, John L.—**F**
Kim, Andrew T.—**MCRA**
Kim, Chun Hong—**BD**
Kim, Kil B.—**PK**
Kim, Seong Soo—**HND**
Kim, Suk Ki—**D**
Kim, Yoon K.—**K**
Kim, Young Sook—**D**
Kimbel, Esten S.—**FR**
Kimbler, Richord W.—**FR**
Kimsey, Letitio S.—**J**
Kincaid, Chorles A.—**J**
King, Horold L.—**MRL**
King, Molcolm H.—**BD**
King, Nettie G.—**J**
King, Wolloce M.—**J**
King, Jr., Jomes C.—**F**
Kingsolver, Wendell R.—**NC**
Kinnaird, Dovid W.—**J**
Kinnaird, Robert—**F**
Kinney, Michoel J.—**BD**
Kircher, Christopher—**J**
Kirk, Cory T.—**HO**
Kirk, Clyde R.—**FR**
Kirkpatrick, Chorles L.—**BE**
Kirtley, Louis R.—**J**
Kirzinger, Stephen S.—**HRD**
Kissinger, Chorles C.—**HND**
Kiteck, Stephen S.—**PUL**
Klapper, Phillip B.—**CAL**
Klein, Howord Williom—**J**
Kleinert, Horold E.—**J**
Kleinsteuber, Wolter—**J**
Klemm, Jonet E.—**MCRA**
Kleykamp, Jr., Roy—**BD**
Kleykamp, Sr., Poul R.—**BD**
Klingenberg, Poul H.—**K**
Klompus, Williom H.—**HO**
Kmetz, Donold R.—**J**
Knepper, Orceno F.—**F**
Knight, E. Roy—**J**
Knoop, J. Douglos—**F**
Knutson, Corl O.—**J**
Koby, Joy S.—**J**
Koby, Melvyn M.—**J**
Koehler, Frederick—**C**
Koff, Ronold M.—**HNR**
Koffler, Bruce H.—**F**
Koh, Suk K.—**WSH**
Kolb, Giselo E.—**J**
Kolb, III, Fronk J.—**MCRA**
Kolkin, Jon—**F**
Kommor, Zollmon—**J**
Koons, Dexter D.—**J**
Korn, Allon M.—**HND**
Kosfeld, Rodney E.—**J**
Kotcamp, Woyne Wheeler—**J**
Kotchen, J. Morley—**F**
Kotchen, Theodore A.—**F**
Kotheimer, Anito R.—**SH**
Kovachevich, Rudy—**J**
Kovacs, Andrew J.—**PUL**
Kozhipat, Ancillo—**J**
Kraft, Jr., Robert P.—**J**
Kral, Kenneth J.—**J**
Kramer, Michoel J.—**C**
Kratz, Robert C.—**C**
Kraus, John W.—**MCRA**
Kraus, Robert F.—**F**
Kreilein, Joel G.—**K**
Kremer, III, Eugene H.—**J**
Kremer, Jr., Eugene H.—**J**
Kruer, Richord D.—**C**
Krumpleman, Jr., J. L.—**MAD**
Kubota, Thomos T.—**J**
Kudmani, George—**J**
Kudva, Rodho V.—**PK**
Kuebler, II, Wolter J.—**WRN**
Kuhn, Clifford C.—**J**
Kuhn, John E.—**J**
Kuhn, Wolfgong F.—**J**
Kuhn, Jr., Forrest S.—**J**
Kuhns, Dwight M.—**J**
Kuhns, Jomes G.—**J**
Kukreja, Rochpol S.—**PK**
Kumar, Sushil V.—**J**
Kumpe, Corl W.—**K**
Kunajukr, Sutip—**FLO**
Kung, Morkus K.—**F**
Kuo, Sanford H.—**F**
Kupper, Ronold M.—**MCRA**
Kutnicki, Benjomin—**CAR**
Kutz, Joseph E.—**J**
Kuzman, John H.—**BOO**
Kyker, Poul G.—**F**

L

Lach, Jr., John A.—**J**
Lacy, Clint M.—**D**
Lacy, Jerome P.—**J**
Lam, Robert C.—**F**
Lambert, Chorles R.—**GRP**
Lambert, Jomes H.—**HO**
Lambert, Jr., Glen E.—**J**
Lambert, Jr., Hermon J.—**PER**
Lamkin, Jr., Nelson—**F**
Landis, Edword E.—**J**
Lane, Dennis—**PUL**
Lange, Amondo W.—**FR**
Langley, Jr., Leslie W.—**HRD**
Langub, Moises P.—**CLA**
Lansing, Allon M.—**J**
Lanter, Kenneth E.—**K**
Larsen, Ferris I.—**HO**
Larson, Gerold M.—**J**
Larson, John B.—**J**
Larson, Jr., John B.—**J**
Larumbe, Dick C.—**BD**
Lauw-Wong, Khing T.—**OH**
Lavery, J. Potrick—**J**
Law, Fronk D.—**CAR**
Law, Robert K.—**LET**
Lawson, George M.—**J**
Leake, Robert S.—**K**
Leatherman, Kenton D.—**J**
Leavell, Ullin W.—**F**
Leblique, Leopold B.—**J**
Lee, Ho Woon—**ROW**
Lee, Jomes M.—**J**
Lee, Joseph M.—**GRY**
Lee, W. Vernon—**K**
Lee, Yung Poe—**HRL**
Leedhanachoke, Oon—**PK**
Leger, Anthony F.—**HRL**
Leggett, Jr., Albert E.—**J**
Leguizamon, Corlos A.—**J**
Lehman, Robert J.—**J**
Lehn, Fronk W.—**J**
Lehocky, Ronold—**J**
Leichter, Steven B.—**F**
Leigh, Lynn W.—**HO**
Leight, Leonord—**J**
Leis, Albert E.—**J**
Leland, John H.—**OL**
Lemal, Poul E.—**K**
Lemon, Fronk R.—**F**
LeNeave, Chorles D.—**GRV**
Lennarson, Vincent A.—**F**
Leonard, Thomos P.—**FR**
Leonard, Jr., Thomos P.—**SH**
Lepanto, Phillip B.—**J**
Lerman, Robert I.—**J**
LeRoy, Joseph B.—**J**
LeSage, J. Bernord—**BE**
Leslie, Edword D.—**FR**
Leslie, Lorry M.—**FLO**
Leslie, Rondoll H.—**FLO**
Lessenberry, Hugh B. A.—**HO**
Lett, Poul E.—**BD**
Levin, Richard D.—**BOO**
Levin, Richard M.—**J**
Levine, Ronold L.—**J**
Levy, Williom I.—**F**
Lewis, Bornett W.—**F**
Lewis, Dovid T.—**HRD**
Lewis, F. Cohen—**BRT**
Lewis, Jock D.—**MAD**
Lewis, Poul R.—**CTR**
Lewis, Jr., Bloine—**J**
Lewis, Jr., Normon V.—**J**
Lichtenstein, Philip K.—**C**
Lichtenstein, Steven J.—**J**
Lieber, Arthur—**F**
Liebman, Jocob—**F**
Liebschutz, Dovid C.—**BL**
Life, Dorrell D.—**CLA**
Liles, Woyne C.—**HND**
Lim, Pedro K.—**BD**
Lindeman, Robert D.—**J**
Lindsay, Dwight E.—**J**
Lineberry, Triston K.—**HO**
Ling, Ji-toong—**J**
Linss, Williom P.—**K**
Linville, Aoron W.—**BOU**
Lira, Auroro M.—**K**
Lister, Grohom D.—**J**
Litzenberger, W. A.—**HRD**
Liu, Pinghui V.—**J**
Liu, Yong K.—**J**
Llewellyn, John S.—**J**
Lloyd, John A.—**J**
Lo, Eric Lup-Sing—**CLA**
Lockett, Fredericko C.—**NL**
Loeb, Thomos M.—**J**
Logan, Thomos B.—**HND**
Logan, III, John A.—**HND**
Logsdon, Mortin T.—**J**
Logsdon, Jr., Joseph E.—**J**
Lolley, Dovid M.—**HO**
Long, Groydon A.—**F**
Long, Robert C.—**J**
Long, Robert J.—**MAD**
Long, Russell S.—**FR**
Long, Williom L.—**CHR**
Longshore, Robert T.—**K**
Lopecillo, Goldelino—**J**
Lopez, Edgor A.—**J**
Lordon, Robert E.—**J**
Lorenz, Mork A.—**CAL**
Loucks, John D.—**D**
Love, Jon R.—**HO**
Love, Selby V.—**J**
Loventhal, John P.—**F**
Lovett, John D.—**D**
Lowe, Virgil W.—**HO**
Lowenbraun, Stanley—**J**
Lowrey, Jr., Ferrell C.—**J**
Lowry, Clifton E.—**D**
Lowry, Conie C.—**CAL**
Loy, Millord C.—**AD**
Lubbe, Ronold J.—**K**
Lubbers, Roger L.—**PK**
Lucas, Aoron E.—**J**
Lucas, Bruce A.—**F**
Lucas, Chorles T.—**J**
Ludwig, Arnold M.—**F**
Luftman, Mortin J.—**F**
Lukins, Joseph L.—**BL**
Lykins, Robert W.—**J**
Lykins, Somuel W.—**F**
Lynch, Theodore N.—**J**
Lynd, Priscillo A.—**F**
Lyon, Wendell V.—**BD**

M

MacCarthy, Justin—**BAR**
MacFarlane, Noble T.—**F**
MacGregor, Roderick H.—**TRM**
Mack, H. Burl—**J**
Mack, II, Jomes C.—**J**
MacKay, Jeon M.—**WT**
MacMillan, Duncon R.—**J**
Macon III, Jomes B.—**J**
Madauss, Williom Corl—**D**
Maddela, Ricordo B.—**HND**
Maddela, Zenoido A.—**HND**
Maddiwar, Gongodhor L.—**FLO**
Maddox, Poul F.—**WF**
Maddox, Jr., Tom S.—**D**
Maddux, Howord Gregory—**CR**
Magallon, Robert A.—**J**
Magary, Victor J.—**K**
Magruder, Morgoret B.—**MCRA**
Maguire, Herbert T.—**J**
Maguire, Lowrence C.—**F**
Mahaffey, Chorles K.—**BL**
Mahaffey, Doniel E.—**J**
Mahaffey, Hugh—**MAD**
Mahaffey, J. Hermon—**J**
Mahaffey, Logon M.—**J**
Mahalingashetty, P. B.—**PER**
Mahan, J. Morsholl—**J**
Mahl, Chorles F.—**J**
Mahr, Merle M.—**HO**
Maier, Godfrey G.—**J**
Maionchi, Poulo M.—**MAD**
Majmundar, Minoxi G.—**FLO**
Makk, Loszlo—**J**
Maldonado, Alberto R.—**J**
Malek, John C.—**F**
Malempati, Indiro—**PK**

Malempati, Srihari—**PK**
Malik, Ahmed M. A.—**PK**
Malik, Mumtaz I.—**HRD**
Maliyekkel, Ittoop T.—**CHR**
Mallik, Bolwont S.—**J**
Malluche, Hartmut H.—**F**
Malubay, Fiorello G.—**U**
Manchikanti, Loxmaiah—**MCRA**
Mandelstam, Paul—**F**
Mangat, Devinder S.—**K**
Mangla, Lol C.—**PER**
Manlavi, Thelmo S.—**CHR**
Mann, Nirmal S.—**J**
Mann, Ronald F.—**PK**
Mann, Wanless R.—**TA**
Manongdo, Ernesto M.—**F**
Manthey, Fronk A.—**TO**
Mappala, Francisco C.—**BE**
Marchal, Gilbert E.—**J**
Marchand, John H.—**HND**
Marchand, Leapold—**ROW**
Marcum, Aoron T.—**J**
Marcum, Sidney G.—**J**
Mardis, Richord E.—**J**
Marion, Eugene L.—**BAR**
Marker, Douglas E.—**K**
Markesbery, Horald V.—**BOO**
Marks, Byron W.—**K**
Marquardt, Robert G.—**CAL**
Marrs, Williom—**BAR**
Marsh, Jahn C.—**BAR**
Marshall, Ernest W.—**J**
Marshall, Jomes A.—**J**
Marshall, Jennings B.—**J**
Marshall, Joseph C.—**J**
Marshall, M. Ernest—**HO**
Marshall, Thamas M.—**J**
Marshall, Thomos R.—**J**
Martin, Cecil D.—**CAR**
Martin, Charles E.—**F**
Martin, Dan A.—**HO**
Martin, Denis G.—**J**
Martin, Florentin A.—**BL**
Martin, Herman E.—**BD**
Martin, Homer B.—**J**
Martin, Jerry W.—**WRN**
Martin, Keith—**BD**
Martin, Larry Edward—**J**
Martin, Lewis E.—**LO**
Martin, Lowell D.—**FLO**
Martin, Ray A.—**J**
Martin, **Jr.**, Edward K.—**FR**
Martinez, Aureliano—**C**
Martinez, Serge A.—**J**
Maruyama, Yosh—**F**
Masden, Ronald R.—**J**
Mason, Aaron S.—**F**
Masri, Zahi H.—**J**
Massey, William O.—**PUL**
Massie, Francis Miltan—**WD**
Masterson, Byron J.—**J**
Matallana, Jorge E.—**J**
Matheny, Robert B.—**BE**
Mathew, Shiela—**J**
Mathews, **III**, Mock R.—**J**
Mathis, Charles H.—**LO**
Matibag, Victor P.—**J**
Matthew, Williom H.—**CTR**
Mattingly, Jaan E.—**F**
Mattingly, Sally S.—**F**
Mattingly, William T.—**F**
Mattox, Alfred E.—**J**
Maurer, Joseph E.—**J**
Mavroudis, Constantine—**J**
Maxson, William T.—**F**
Maxwell, Edword N.—**J**
Maxwell, **Jr.**, Edward N.—**F**
May, Russell T.—**J**
May, Sean S.—**CHR**
Maya, Gaston N.—**J**
Mayo, Mario—**J**
Mayer, Jacob M.—**GRV**
Mayer, Llayd D.—**F**
Mayer, Thomos M.—**C**
Mayo, W. Porter—**F**
Mays, E. Truman—**PUL**
Mays, Terrell D.—**HRD**
McAlister, **Jr.**, Terrence—**BD**
McAllister, Donold T.—**J**
McAllister, Roseann G.—**J**
McAllister, **Jr.**, Russell—**F**
McBee, Michael H.—**GRV**
McBrayer, Lucien F.—**SCT**
McCabe, Robert J.—**C**
McCall, Michael W.—**J**
McClane, Jahn R.—**J**
McClellan, **Jr.**, John W.—**HND**
McClendon, Robert L.—**J**
McClure, G. David—**J**
McClure, George M.—**BL**
McClure, Larry T.—**GRY**
McCord, Gerald H.—**CHR**
McCormack, William M.—**D**
McCoy, Martha T.—**J**
McCracken, Jahn E.—**MCRA**
McCready, Robert A.—**F**
McCrocklin, George W.—**J**
McCrocklin, Kenneth H.—**CAR**
McDaniel, William E.—**F**
McElheney, Diane M.—**BOO**
McElwain, William P.—**AN**
McEndre, Ray B.—**LO**
McFadden, Dan C.—**MNT**
McFarland, Ranald M.—**WN**
McGaffee, Dano Jay—**J**
McGavic, Jahn D.—**J**
McGee, Edgar M.—**F**
McGhee, William R.—**MU**
McGlinn, Jaan F.—**J**
McGrath, Robert J.—**J**
McGuire, **Jr.**, Tom O.—**PK**
McHargue, Claude L.—**WN**
McHargue, Frederick B.—**F**
McIntyre, Deborah L.—**PER**
McKay, Jahn A.—**D**
McKee, Willis P.—**SH**
McKee, **Jr.**, Willis P.—**FR**
McKelvey, Chorles H.—**D**
McKenna, William H.—**MNT**
McKenney, Robert L.—**PND**
McKeown, Jahn M.—**J**
McKiernan, **Jr.**, James E.—**J**
McKinley, Caralyn H.—**BAR**
McKinley, George G.—**BAR**
McKinley, Robert N.—**BAR**
McKinney, Dauglas E.—**BD**
McKinney, Joseph E.—**MAS**
McLain, **Jr.**, Lee Wm.—**J**
McLaughlin, Martha D.—**J**
McLaughlin, **II**, Arthur J.—**J**
McLeod, Robert N.—**PUL**
McMahon, James R.—**J**
McManis, James C.—**F**
McManus, William A.—**D**
McMartin, Daniel D.—**J**
McMillan, Gary L.—**MCRA**
McMorrow, R. Gregory—**F**
McMurry, Garden T.—**J**
McNeely, James D.—**J**
McNerney, Jules J.—**CHR**
McQuady, **Jr.**, Robert L.—**J**
McRoberts, J. Williom—**F**
McWhorter, Howard B.—**BD**
Mecca, Raymond V.—**BD**
Meckler, Roy J.—**J**
Medina, William D.—**F**
Medina, **Jr.**, Artemio S.—**K**
Medley, **Jr.**, R. Wothen—**D**
Medrosa, Melonio Y.—**PUL**
Meeker, **Jr.**, Williom R.—**F**
Meiers, Henry N.—**WRN**
Meigs, Lamar C.—**BD**
Melo, Julio C.—**J**
Melton, Gary J.—**GRT**
Mendiondo, Oscar A.—**F**
Mendoza, Lorenzo P.—**JES**
Menke, Richard J.—**K**
Mercer, Charles B.—**J**
Meriwether, Robert P.—**MCRA**
Mersack, Ira P.—**F**
Mersch, Williom J.—**K**
Messana, Benedict J.—**K**
Mettu, Jyathi—**PK**
Mettu, Romanaroo V.—**PK**
Meyer, David Andrew—**F**
Meyer, **Jr.**, Dexter—**PK**
Meyers, James A.—**J**
Meyers, Stephen F.—**C**
Mickler, Andrew S.—**J**
Middendorf, Mork E.—**K**
Middleton, **Jr.**, Jomes W.—**HRT**
Milan, Michael F.—**F**
Milburn, Caral S.—**C**
Milburn, Joseph L.—**HO**
Miles, Douglas R.—**K**
Miles, Richord S.—**RU**
Milholen, Linda S.—**LIN**
Millan, Joselito L.—**J**
Miller, Alfred O.—**J**
Miller, Don—**CAL**
Miller, David S.—**CAR**
Miller, Elgan L.—**J**
Miller, Fronk B.—**HO**
Miller, Geargе E.—**K**
Miller, Harold M.—**HO**
Miller, James W.—**GRN**
Miller, Jahn D.—**HRL**
Miller, John W.—**J**
Miller, Joseph R.—**MRL**
Miller, Lora S.—**PUL**
Miller, Milton F.—**J**
Miller, Robert B.—**MCRA**
Miller, Thomos R.—**F**
Miller, Williom L.—**MU**
Millett, Adrienne J.—**F**
Mills, Buell B.—**BE**
Mills, Clorence J.—**GRV**
Mills, Judy C.—**J**
Mills, **Jr.**, Harry F.—**C**
Minish, Lawrence T.—**J**
Minix, Michael B.—**JNS**
Mintu Valera, Remedios—**PK**
Mitchell, Bruce B.—**J**
Mitchell, Edward L.—**J**
Mitchell, Richard A.—**J**
Mitchell, Wilber A.—**J**
Mitchell, William C.—**J**
Mitchell, William H.—**MAD**
Mitenieks, Alfreds—**CHR**
Mitzlaff, Louis—**J**
Moberly, Fred P.—**F**
Moberly, Horold S.—**CLK**
Modur, Raghuron S.—**PK**
Mody, Bhorat—**BAR**
Mody, Bharati—**BAR**
Mohiuddin, Mosorrat—**SCT**
Molloy, **III**, James F.—**J**
Molony, Dennis R.—**C**
Molony, Joseph Thomos—**K**
Monin, Jomes E.—**RU**
Monnig, William B.—**K**
Monroe, Robert F.—**J**
Monsivais, Jose J.—**HRD**
Monteyne, Peter J.—**ROC**
Montgomery, Roy W.—**HND**
Montgomery, W. O.—**MCRA**
Montgomery, **Jr.**, E.—**BL**
Mooney, Charles S.—**F**
Moore, Andrew M.—**F**
Moore, Charles R.—**F**
Moore, Clyde T.—**J**
Moore, Condict—**J**
Moore, Frank H.—**WRN**
Moore, Gerald L.—**J**
Moore, Glenn I.—**F**
Moore, Herman R.—**J**
Moore, James E.—**BD**
Moore, Laran P.—**D**
Moore, Patrick J.—**J**
Moore, William R.—**J**
Moore, William T.—**WRN**
Moore, **III**, Bacon R.—**MER**
Moore, **Jr.**, Charles C.—**BE**
Moore, **Jr.**, Ray H.—**J**
Moorhatch, John M.—**J**
Moosnick, Fronklin B.—**F**
Moossun, M. Hassen—**HRD**
Moran, **Jr.**, Charles T.—**J**
Morehead, C. D.—**MCRA**
Moreman, **II**, Lucion Y.—**HRD**
Morena, Moria J.—**J**
Morford, Jack T.—**NC**
Morgan, A. Reeves—**GRV**
Morgan, H. Braaks—**F**
Morgan, Kirk D.—**J**
Morgan, Williom S.—**BOU**
Morgan, **Jr.**, E. Byran—**J**
Morgan, **Sr.**, Edgor B.—**J**
Moroz, Matthew A.—**OH**
Morris, Charles W.—**J**
Morris, Chester A.—**K**
Morris, Jahn R.—**J**
Morris, Peter J.—**LES**
Morris, Ralph C.—**J**
Morris, Walter R.—**J**
Morris, **Jr.**, Charles F.—**J**
Morrison, Chorles R.—**J**
Morrissey, Robert W.—**J**
Morrow, Philip G.—**J**
Morrow, Richard C.—**PUL**
Mortara, Richard H.—**F**
Moseley, Mortimer H.—**LY**
Moser, Ray J.—**K**
Moses, Bernard C.—**WT**
Moses, William M.—**J**
Mosley, Danald H.—**J**
Moss, James P.—**J**
Moss, Kelly G.—**MAS**
Moss, Marris David—**BAR**
Moss, Sandra D.—**BAR**
Moss, William E.—**J**
Mostowycz, Leonidas—**F**
Mowry, Stephen P.—**J**
Moyer, Ronald P.—**J**
Muckenhausen, Christa—**PK**
Mudd, Joseph P.—**J**

Mudd, Lawrence R.—**J**
Mueller, Maurice J.—**K**
Mufti, Aziz Gul—**PUL**
Mujumdar, Suhos P.—**BE**
Mujumdar, Sulabha S.—**BE**
Mukherjee, Sudhideb—**SCT**
Mukherji, Chandra—**J**
Mukherji, Photick K.—**J**
Muldrow, Jr., Louis M.—**F**
Mullen, Alvin B.—**J**
Mulliken, David K.—**PK**
Mullins, Fitzhugh—**J**
Munnell, Doniel M.—**MAD**
Munther, Antoine S.—**AD**
Murdock, Kenneth—**C**
Murphy, Dauglas R.—**J**
Murphy, Owen B.—**F**
Murphy, Patrick J.—**J**
Murphy, Jr., Joseph K.—**J**
Murphy, Jr., Potrick—**BUL**
Murray, Morvin—**J**
Murrow, Joseph T.—**J**
Musgrave, Ernest E.—**JNS**
Mutchler, Bradfard E.—**MCRA**
Myers, James P.—**CHR**
Myers, Mellayne R.—**F**
Myers, Rabert K.—**HRD**
Myers, Woyne C.—**D**
Myers, Jr., John E.—**F**
Myers, Jr., Roland H.—**MCRA**
Myre, Louis D.—**MCRA**
Myre, Theodare T.—**MCRA**

N

Naber, John A.—**C**
Nacke, Marris—**J**
Nagar, Chander M.—**J**
Nagaraju, Hirikati S.—**J**
Nall, Michael S.—**J**
Nans, N. Thomas—**HO**
Narayan, Vaduvur S.—**J**
Nash, Arthur J.—**LET**
Nash, William N.—**J**
Nave, Richard R.—**J**
Nawab, Syed M.—**J**
Nayak, Irvathur N.—**PER**
Nedelkoff, Bogdan—**J**
Needleman, Michoel D.—**J**
Neel, Donald R.—**D**
Nehil, Jahn L.—**J**
Nell, Gearge W.—**J**
Nell, James E.—**HO**
Nelson, Andrew P.—**FU**
Nelson, David—**J**
Nelson, G. Dudley—**HRL**
Nestor, Michael D.—**J**
Neustadt, David H.—**J**
Newberry, Rabert C.—**WRN**
Newman, Jahn S.—**HND**
Newton, Jack R.—**D**
Nguyen, Chot V.—**D**
Nichol, Tam D.—**J**
Nicholls, Paul J.—**F**
Nichols, Chorles G.—**PK**
Nichols, Clem E.—**HRT**
Nichols, George R.—**J**
Nichols, Jae A.—**HRS**
Nichols, **II**, Geargе R.—**J**
Nicholson, Charles H.—**F**
Nickel, Allan E.—**HO**
Nickel, Suson P.—**HO**
Nicol, Patricia K.—**FR**
Nighbert, Edwin J.—**F**
Nightingale, David S.—**J**
Noe, Geargе W.—**MER**
Noel, Robert A.—**J**
Nolan, Edwin W.—**J**
Nolan, Robert B.—**J**
Nold, Rabert L.—**J**
Nolph, Michael B.—**J**
Noonan, Jacqueline A.—**F**
Noonan, John D.—**MCRA**
Norsworthy, Eric A.—**OH**
Norsworthy, Robert E.—**OH**
Northern, Dana Karen—**LO**
Norvell, Wyatt—**HNR**
Noss, Charles G.—**PO**
Noss, Glenn R.—**MCRA**
Nunemaker, Larry Wayne—**PUL**
Nunez, Albino G.—**HRL**
Nunnelley, Jr., Prestan—**F**
Nunnelly, **III**, Sherrell—**J**
Nussbaum, Alan M.—**J**
Nutini, Carl J.—**K**
Nutini, Louis J.—**K**
Nuygen, Chung T.—**CHR**

O

O'Brien, Ethel H.—**J**
O'Brien, Jomes O.—**J**
O'Brien, Jahn D.—**J**
O'Bryan, William Mortin—**D**
O'Conner, Rabert W.—**C**
O'Connor, Rabert R.—**J**
O'Nan, William W.—**HND**
O'Neill, Patrick A.—**D**
Oberst, Charles R.—**J**
Oblander, Jr., Earnest F.—**J**
Odulio, Benito V.—**J**
Odulio, Brunhilda G.—**J**
Oelze, Russell—**D**
Offutt, Randalph L.—**FR**
Offutt, **IV**, William N.—**F**
Ogden, Lynn L.—**J**
Ogden, Owen S.—**J**
Ohler, Raymond A.—**WT**
Olash, F. Albert—**J**
Oldham, William E.—**J**
Oldham, William J.—**D**
Oliver, Earl P.—**AL**
Oliver, William J.—**J**
Olmstead, Willard B.—**F**
Olson, Larry W.—**J**
Olson, Lynn—**WRN**
Olson, Naven M.—**J**
Olson, Williom H.—**J**
Oropilla, Teresita B.—**J**
Orr, C. Pittman—**MCRA**
Orr, Rabert A.—**GRV**
Orr, Jr., James A.—**F**
Orrahood, M. David—**D**
Ortines, Cesar G.—**LA**
Osborne, Mary L.—**J**
Overstreet, A. Evan—**J**
Overstreet, Robert G.—**J**
Overstreet, Sam A.—**J**
Owen, Lafayette G.—**J**
Owens, Harald W.—**BRK**
Owens, Jack W.—**J**

P

P'Pool, Billy W.—**CAL**
Pack, Rick—**HRL**
Padgett, Rabert A.—**HRD**
Padgett, W. Neil—**D**
Pagani, Luis F.—**C**
Page, Harvey A.—**PK**
Pagtakhan, Leanar S.—**PK**
Pahk, Elizobeth Y—**J**
Pajo, Jr., Fernanda C.—**J**
Pal, Eugene J.—**J**
Palacio, Jase M.—**J**
Palmer, Francis F.—**CAR**
Palmer, Lee—**J**
Pancoast, Jahn R.—**C**
Pape, Richard C.—**J**
Pappas, John E.—**F**
Param, Ekamboram—**FLO**
Park, Donald S.—**JNS**
Park, Geargе R.—**F**
Park, Richard F.—**WT**
Park, Saan IE—**C**
Park, **III**, Frederic C.—**D**
Parker, David H.—**FR**
Parker, James E.—**J**
Parks, Jahn H.—**F**
Parks, Paul J.—**WRN**
Parks, Sara J.—**D**
Parlade, Rafael J.—**BAR**
Parr, Eugene Q.—**F**
Parrish, Charles W.—**HO**
Parrott, James A.—**CHR**
Parrott, Narman A.—**MCRA**
Parrott, **II**, Olsan—**WD**
Parsley, Barry N.—**F**
Parsley, William M.—**J**
Passidomo, Michael A.—**PK**
Pate, Jahn W.—**HO**
Patel, Ashakkumar R.—**PER**
Patel, Chandrakant C.—**J**
Patel, J. A.—**WN**
Patel, Kirit T.—**F**
Patel, Kusum—**CHR**
Patel, Madhukanta J.—**PUL**
Patel, Mahendra—**HRD**
Patel, Satish R.—**F**
Patel, Sharad C.—**HRD**
Patel, Tarangini C.—**J**
Pathak, Jitendra A.—**LO**
Pathak, Kunja J.—**LO**
Patil, Jagdish S.—**WT**
Patil, Usha J.—**WT**
Patrick, Olney M.—**FR**
Patton, Jahn A.—**MCRE**
Patton, Marcus—**WRN**
Pauly, Thamas H.—**F**
Pavon, Hector Eduardo—**TRG**
Paxton, D. Geraldine—**J**
Payne, Gabe A.—**CHR**
Payne, W. Faxan—**CHR**
Peak, William P.—**J**
Pearce, Charles E.—**J**
Pearce, Luther W.—**J**
Pearson, William E.—**D**
Peat, Kenneth W.—**F**
Peck, Charles E.—**RU**
Pedigo, George W.—**J**
Peeno, Dauglas O.—**J**
Peisel, Francis J.—**J**
Pellegrini, John L.—**LET**
Pellman, Martin J.—**J**
Pelstring, Mark F.—**K**
Pence, Habert L.—**J**
Pengvanich, Chaisak—**J**
Penn, Dennis B.—**F**
Penner, Daniel B.—**J**
Pennington, Robert E.—**F**
Perellis, Maurice A.—**J**
Perez, Antalin J.—**J**
Perez, M. Rabert—**WRN**
Perlstein, Irving B.—**J**
Perrine, Jahn D.—**F**
Perry, Charles R.—**K**
Pesci, William L.—**BL**
Peters, C. Kenneth—**J**
Peterson, Gary H.—**J**
Peterson, Gilman P.—**HRT**
Peterson, Radney A.—**J**
Peterson, Jr., Gilman P.—**BAR**
Peterson, Jr., Robert T.—**FU**
Petit, James M.—**K**
Petro, Geargе J.—**J**
Petry, John A.—**J**
Pettey, Jae T.—**RU**
Petty, William M.—**J**
Petway, Willard J.—**MCRA**
Peveler, Michael L.—**J**
Peyton, Lewis T.—**J**
Peyton, Marris L.—**MOR**
Pfeifer, Michael A.—**J**
Pfingst, Harry A.—**J**
Pfister, Glenn L.—**C**
Phelps, Jerry A.—**J**
Phillips, Barbara A.—**F**
Phillips, Reginald J.—**D**
Phillips, Jr., James K.—**WN**
Pickar, Daniel N.—**J**
Picklesimer, Fronk M.—**JNS**
Pierce, Gene S.—**J**
Pierce, W. Vinson—**C**
Pierce, Jr., Raymand E.—**J**
Pietsch, Jahn B.—**J**
Pigman, Alger B.—**PER**
Pigman, Carl—**LET**
Pike, Lucy G.—**J**
Pike, Samuel P.—**HRD**
Pinho, Maria E.—**K**
Pinkstaff, Thamas H.—**F**
Pipkin, Daris—**J**
Pipkin, Fred—**J**
Pisacano, Nichalas J.—**F**
Pisterman, Sergio—**J**
Pitman, Raemer D.—**WT**
Pittman, Gregary L.—**J**
Pitzer, Frank R.—**CHR**
Playforth, Otta S.—**GAR**
Playforth, R. Herman—**F**
Plumlee, Jahn E.—**F**
Podoll, Ranald E.—**J**
Podruch, Phillip E.—**J**
Poe, Jean A.—**FU**
Pois, Allen J.—**CHR**
Pokorny, Vaclav I.—**HO**
Polk, Jr., Hiram C.—**J**
Pongdee, Ouen—**BE**
Poore, Flayd G.—**BOO**
Pope, James G.—**F**
Pope, Robert G.—**J**
Pope, Jr., Daniel B.—**F**
Popham, Bernard I.—**J**
Popham, Timothy B.—**J**
Poppens, Cliffard A.—**D**
Portnoy, Jane Zuger—**J**
Portwine, E. Fred—**J**
Post, Henry W.—**J**
Potter, Ira B.—**FLO**
Potter, Jahn R.—**BD**
Potts, Albert M.—**J**
Potts, Clintan R.—**J**
Poulos, Alexander—**PK**
Poundstone, Jahn W.—**F**
Poweleit, Alvin C.—**K**
Poweleit, Alvin D.—**K**

Powell, Glenn R.—**MER**
Powell, Robert W.—**J**
Powell, William C.—**CLN**
Powers, William—**SH**
Powers, William H.—**J**
Prada, Benjamin—**J**
Prajapati, Dattatroya S.—**D**
Prasher, Susan H.—**BD**
Prater, Bryan N.—**MAS**
Pratt, Gerald R.—**WN**
Pratt, Mary L.—**PER**
Pratt, William D.—**LRL**
Preston, Charles L.—**F**
Preston, Mary E.—**J**
Preston, William O.—**F**
Prewitt, Elmer G.—**WT**
Prewitt, John H.—**F**
Price, Ann C.—**J**
Price, Charles L.—**OH**
Price, Dovid P.—**F**
Price, John R.—**CSY**
Price, Paul H.—**MCRA**
Primm, **Jr.**, Doniel D.—**F**
Privett, **Jr.**, George W.—**F**
Procter, David H.—**GRP**
Prots, Robert A.—**LRL**
Proudfoot, Warren H.—**ROW**
Pruitt, Thamas D.—**HRL**
Puerto, Alfonso—**J**
Pugh, William E.—**J**
Puig, **Jr.**, Froncisca U.—**JNS**
Pulito, Andrew R.—**F**
Pulliam, James M.—**SMP**
Purcell, Corolyn F.—**F**
Purdom, Barry N.—**F**
Putnam, Louis R.—**K**

Q

Quader, Anwarul—**D**
Quaife, Clarence E.—**J**
Queen, Ragers L.—**J**
Quertermous, John C.—**CAL**
Quertermous, Jahn R.—**CAL**
Quillin, Rolph C.—**F**
Quinby, Patricia M.—**J**

R

Rader, Emmanuel H.—**BE**
Rader, W. Allen—**BE**
Radmacher, B. Fronk—**J**
Radmanesh, M. H.—**PUL**
Radtke, Normon D.—**J**
Raff, Martin J.—**J**
Ragsdale, **Jr.**, Jahn W.—**FU**
Rainey, Fred C.—**HRD**
Raitiere, Calin R.—**GAR**
Ram, Madhira D.—**F**
Ramey, James W.—**BL**
Ramsey, Barry W.—**F**
Ramsey, James T.—**FR**
Ramsey, William C.—**J**
Ramsey, **III**, Bartan L.—**J**
Ranade, Nilkanth Bopu—**LET**
Rand, Bernard O.—**J**
Randall, Fronk W.—**F**
Rankin, C. Edward—**F**
Rankin, Corl B.—**J**
Rankin, Thomas P.—**J**
Ransdell, **Jr.**, Herbert T.—**J**
Rao, Kommineni L.—**CLA**
Rapier, **Jr.**, Joseph H.—**JNS**
Rashidian, John—**HND**
Raskin, Larry M.—**J**
Rasmussen, Kenneth—**BE**
Rastogi, Gopal K.—**LRL**
Ratliff, John W.—**MRN**
Ravani, Pran D.—**J**
Ravenscraft, Haward L.—**BOO**
Ravvin, Leon J.—**F**
Rawlings, John—**FR**
Ray, Edward H.—**F**
Ray, Hugh L.—**BD**
Ray, J. Michael—**J**
Ray, **Jr.**, Edword H.—**F**
Rayburn, Mack—**D**
Rayner, Abigail V.—**HO**
Reader, G. Scott—**HO**
Reams, Gerald B.—**BD**
Reams, Harold L.—**F**
Reckmann, Heimo—**CU**
Redden, John D.—**K**
Reddy, Mitto A. K.—**J**
Reddy, Norasimho—**BAR**
Reddy, Syomala H. K.—**PER**
Redinger, Richord N.—**J**
Redmon, James E.—**J**
Reed, George C.—**WD**
Rees, Allon H.—**J**
Reeves, John A.—**K**
Reich, David R.—**D**
Reichard, K. Thomos—**J**
Reichert, Robert E.—**K**
Reid, Ben A.—**J**
Reid, Robert L.—**D**
Reid, Samuel H.—**BL**
Reid, **Jr.**, Ben A.—**J**
Reinecke **Jr.**, Frank M.—**J**
Reiss, Frederick C.—**J**
Reitz, John F.—**C**
Remo, Eduardo S.—**K**
Renaker, George A.—**K**
Resinger, Harold E.—**F**
Reusche, Juan M.—**F**
Reutlinger, Barton—**J**
Reutman, William E.—**BOO**
Reyes, Prudencio Y.—**HRL**
Reynolds, Glynn E.—**MAD**
Reynolds, Johnny G.—**J**
Reynolds, L. Roymand—**F**
Reynolds, Roy D.—**SMP**
Reynolds, **Jr.**, Fred C.—**D**
Rhodes, Chorles M.—**BD**
Rice, Jomes F.—**J**
Rice, Jahn F.—**J**
Rice, Nelsan T.—**FR**
Rice, Robert L.—**MAD**
Rice, Russell R.—**J**
Rice, Samuel Lee—**CU**
Rice, William M.—**LIN**
Rich, James R.—**K**
Richard, Henri-Cloude—**HRD**
Richards, Glen D.—**D**
Richardson, J. David—**J**
Richardson, Otis M.—**HRD**
Richardson, Ranald L.—**J**
Richardson, Todd G.—**J**
Richey, Judy F.—**BAR**
Richman, Anne C. D.—**J**
Richman, Stephen P.—**J**
Richmond, Ralond W.—**J**
Riddle, Bruce W.—**D**
Ridenour, **Jr.**, James C.—**F**
Rider, Joan E.—**F**
Riegler, Sandra L.—**F**
Riehl, Richard E.—**J**
Riehm, James D.—**WRN**
Riehm, John G.—**J**
Rieser, Jomes S.—**J**
Riestra, Evorista—**BD**
Riggs, R. Kothleen—**F**
Rigor, **Sr.**, Ben M.—**J**
Riherd, Leslie M.—**D**
Riker, William L.—**MER**
Riley, **Jr.**, James M.—**J**
Riley, **Jr.**, John P.—**F**
Rindani, Arun B.—**WT**
Ringel, David R.—**J**
Rison, Allan T.—**K**
Rivas, Frank—**BD**
Roach, Benjamin F.—**WD**
Roach, Harry M.—**GRV**
Roach, James P.—**WD**
Roache, Fred B.—**D**
Robbins, James S.—**GRV**
Robbins, Jahn J.—**J**
Robbins, Robert E.—**HRD**
Roberts, Danna M.—**J**
Roberts, Jahn L.—**J**
Roberts, Lowell F.—**MCRA**
Roberts, Mack—**WN**
Roberts, Sheilo—**J**
Roberts, **Jr.**, Lon E.—**MNT**
Robertson, George W.—**J**
Robertson, Jere C.—**CHR**
Robertson, Robert W.—**MCRA**
Robertson, **Jr.**, Dovid—**F**
Robertson, **Jr.**, William C.—**F**
Robie, Carroll H.—**J**
Robinson, Gorner E.—**BD**
Robinson, Gehrig M.—**J**
Robinson, Martho C.—**GRV**
Robinson, Ralph R.—**BE**
Rockov, Vladimir B.—**J**
Rodgers, **Jr.**, George C.—**J**
Rodman, George H.—**MU**
Rodriguez, Felicisim B.—**K**
Roe, Joseph E.—**HO**
Roeckel, Irene E.—**F**
Rogers, Chorles R.—**BD**
Rogers, Edwin L.—**F**
Rogers, John H.—**J**
Rogerson, Charles A.—**AD**
Roles, Earl W.—**J**
Rollings, R. Parnell—**J**
Rollo, F. David—**J**
Romero, A. Eddie—**J**
Rosdeutscher, Horold D.—**WRN**
Rose, Jahn F.—**J**
Rose, Stephen W.—**PUL**
Roseman, Ephraim—**J**
Rosenbaum, Harald D.—**F**
Rosenbaum, Irvin S.—**J**
Rosenberg, Kenneth R.—**J**
Rosenbloom, Philip—**J**
Rosenstein, A. S.—**J**
Roser, Charles L.—**J**
Roski, Richard A.—**J**
Ross, Charles D.—**CHR**
Ross, J. Russell—**D**
Ross, James E.—**F**
Ross, Luke D.—**MCRA**
Roth, John B.—**J**
Roth, Oliver R.—**GRP**
Roth, Richard L.—**J**
Rothschild, Peter A.—**J**
Roush, James R.—**MCRA**
Routt, Ruel T.—**HRD**
Rowe, Lewis L.—**J**
Rowlett, William M.—**CHR**
Rowntree, Gradie R.—**J**
Rowntree, Marjorie—**J**
Roy, Hirendra K.—**TRG**
Rozelle, Jomes F.—**CHR**
Rubel, W. Fielding—**J**
Rubin, Saul—**F**
Rubin, William S.—**J**
Rucker, Richard H.—**MCRA**
Rudd, Russell R.—**FU**
Rudwell, George H.—**J**
Rue, Nelson B.—**WRN**
Ruff, John D.—**F**
Ruktanonchai, Poiroj—**PK**
Rul-lan, Carlos D.—**J**
Rumage, William T.—**J**
Runge, Robert M.—**K**
Rush, E. N.—**J**
Rush, Willett H.—**FR**
Rush, **Jr.**, Willett H.—**FR**
Russell, Henry T.—**K**
Russell, Jomes E.—**F**
Russell, William B.—**WRN**
Rust, Richard J.—**C**
Rutledge, Carl E.—**WRN**
Rutledge, Charles C.—**PER**
Rutledge, Marilyn T.—**WRN**
Ryan, James E.—**J**
Ryan, John E.—**J**
Ryan, **Jr.**, John J.—**J**
Rye, William A.—**FLM**
Rypstra, John B.—**LRL**

S

Saam, Henry G.—**J**
Sabharwal, Koilash C.—**J**
Sabharwal, Urmil—**J**
Sachatello, Chorles R.—**F**
Sadtler, Joseph E.—**J**
Saelinger, Donold A.—**C**
Saha, Sibu P.—**F**
Sahebjami, Naoshoforin—**K**
Sajadi, Koaras—**F**
Sakler, Allen M.—**J**
Salato, Jomes C.—**AD**
Salazar, Mouricio—**J**
Saliba, Alex—**J**
Salisbury, Evelyn E.—**HRT**
Salisbury, Robert J.—**MNT**
Salmon, Jomes L.—**HO**
Salot, Duncan G.—**MRN**
Salot, Roger D.—**J**
Salsitz, Richard B.—**J**
Salter, Jahn J.—**HRL**
Salter, **Jr.**, James I.—**MAD**
Sami, Abdel W.—**HRD**
Samols, Ellis—**J**
Sampang, Benjamin M.—**K**
Sams, **Sr.**, Bernard F.—**J**
Samuel, Jasan T.—**HND**
Sanchez, Jase A.—**BD**
Sanderlin, Billy E.—**WT**
Sanders, Garry—**MAS**
Sanders, George B.—**J**
Sanders, Marilyn M.—**D**
Sanders, Rama J.—**D**
Sanders, Ted J.—**PK**
Sandler, Nat H.—**F**
Sandlin, Everett W.—**C**
Sandman, **Jr.**, Williom J.—**J**
Sanfilippo, Joseph S.—**J**
Sanford, Okey H.—**BD**
Sanneman, Everett H.—**J**
Santa-Teresa, Ben—**SCT**
Sarasohn, Charles—**J**

Sargent, Holmes G.—**MCRA**
Sartini, John C.—**F**
Sasser, Gerald L.—**J**
Saunders, Jahn H.—**F**
Saunders, Jaseph H.—**F**
Sawhill, Fred A.—**J**
Sawhney, Kewal K.—**J**
Saxena, Suresh C.—**HRL**
Saykaly, Ronald J.—**F**
Scalzitti, Carmine J.—**J**
Schaeffer, Everett W.—**CLA**
Schafer, Geargе W.—**J**
Schaper, Paul W.—**MRL**
Scheen, Jr., S. Randalph—**J**
Schell, Merrell W.—**D**
Schell, Robert H.—**D**
Schiavone, Robert P.—**J**
Schickel, Jaseph—**CU**
Schikler, Kenneth N.—**J**
Schiller, Martin—**J**
Schiller, Sheldon B.—**J**
Schindler, Stephen C.—**F**
Schlossberg, Barry J.—**J**
Schmidt, Jaseph E.—**F**
Schmied, William K.—**J**
Schmitt, Catherine A.—**D**
Schmitz, Jahn P.—**BOO**
Schneck, Paul—**J**
Schneider, Glenn D.—**J**
Schneider, James J.—**K**
Schneider, Paul David—**J**
Schnitzker, William F.—**BD**
Schoen, Arthur M.—**J**
Schoo, Bernard J.—**J**
Schosser, Mila H.—**HRL**
Schramm, Theodare A.—**J**
Schrand, James R.—**BOO**
Schreiber, Donald Merle—**J**
Schrodt, Jr., Geargе R.—**J**
Schroeder, Thamas J.—**J**
Schroer, Jomes A.—**C**
Schuhmann, Alan G.—**J**
Schuhmann, Geargе N.—**J**
Schuler, Jahn K.—**BOO**
Schulte, William V.—**F**
Schultz, Arthur F.—**C**
Schultz, Arthur F.—**PUL**
Schumer, Borry—**F**
Schupbach, Harald J.—**D**
Schwab, J. Matthew—**J**
Schwab, John J.—**J**
Schweitzer, Robert L.—**J**
Schworer, Philip B.—**K**
Scobee, Rabert H.—**CLK**
Scofield, Edward L.—**J**
Scott, A. Thornton—**F**
Scott, Brian F.—**MRN**
Scott, Carl H.—**F**
Scott, Caroline P.—**F**
Scott, Edwin P.—**J**
Scott, Frederick A.—**HO**
Scott, Gene W.—**WT**
Scott, L. Jack—**WRN**
Scott, Somuel E.—**MCL**
Scott, Samuel R.—**F**
Scott, Timothy R.—**NC**
Scott, Jr., Jahn H.—**PK**
Scroggin, Frederick R.—**GRT**
Scudder, Jr., Frank E.—**BOO**
Scullin, Jr., Daniel C.—**J**
Scully, Kevin T.—**F**
Scrutchfield, Scott B.—**BL**
Seabury, James C.—**MCRA**
Sears, Jane B.—**F**
Seay, Menefee—**J**
Sebastian, Wilsan—**F**
Seebold, Rabert J.—**J**
Sehlinger, George A.—**J**
Sehra, Kankanady H.—**J**
Seifer, Fred P.—**J**
Seitz, Kent—**J**
Seligman, Jerry W.—**J**
Selke, Albert C.—**F**
Selvidge, William—**WN**
Sembillo, Avelina J.—**LET**
Senese, Robert M.—**J**
Seng, Janet—**J**
Senler, Vicdon A.—**J**
Seo, Tae-Jaan—**WT**
Serey, Patrick J.—**ROW**
Serratoni, Frank T.—**J**
Sessoms, Nara W.—**J**
Settle, Lathan E.—**CLD**
Severs, Charles B.—**J**
Seward, Gary L.—**J**
Sewell, III, H. Price—**BRT**
Sewell, Jr., Frank K.—**MER**
Sewell, Sr., Frank K.—**MNT**
Sexter, Mark S.—**J**
Sexton, Rabert E.—**ROW**
Sexton, Jr., Rabert F.—**J**
Shacklette, C. B.—**J**
Shadowen, Michael W.—**J**
Shafer, Cecil W.—**J**
Shafii, Mahammod—**J**
Shah, Manojkumar—**HO**
Shah, Mrudula J.—**BD**
Shah, Navinchandra R.—**HRD**
Shah, Pravin—**GRP**
Shah, Ramnik B—**CHR**
Shanahan, Patrick T.—**J**
Shane, Charles B.—**J**
Shanklin, J. Day—**J**
Shapiro, Arnald G.—**C**
Shapiro, David—**J**
Sharman, Edward J.—**HRD**
Shaw, Charles R.—**J**
Shaw, Haustan W.—**J**
Shaw, Jerry M.—**J**
Shaw, Millard R.—**HND**
Shaw, III, Robert W.—**J**
Shea, Raymand G.—**J**
Shearer, David—**BOO**
Shearer, Gary A.—**BOO**
Shearer, Glenn R.—**BL**
Shearer, Laretta T.—**J**
Shee, Geargе T.—**J**
Sheikh, Hamid H.—**F**
Shein, Melvin—**J**
Shely, Farest F.—**TA**
Shemwell, Frank A.—**MCRA**
Shenk, J. M.—**K**
Shepard, Rabert D.—**F**
Shepherd, Frederick P.—**J**
Shepherd, Millard A.—**PUL**
Shepherd, Narma T.—**CHR**
Sheridan, Richard T.—**BOO**
Sherman, Jahn C.—**K**
Sheth, Mohitkumar K.—**HO**
Sheth, Rajesh K.—**J**
Shidal, William D.—**MCRA**
Shields, Charles L.—**MCRA**
Shields, Charles R.—**J**
Shields, Christapher B.—**J**
Shier, Rabert W.—**F**
Shine, Lee C.—**F**
Shipp, Charles J.—**MU**
Shipp, Darl B.—**GRT**
Shipp, David C.—**J**
Shipp, Rabert S.—**TA**
Shirkey, Harry C.—**C**
Shively, Eugene H.—**TA**
Shoemaker, Danald R.—**J**
Shoff, Dennis G.—**HO**
Short, Dwight B.—**J**
Shott, Roger J.—**J**
Shouse, Leroy—**MAS**
Shpilberg, George Y.—**J**
Shrader, Edward C.—**J**
Shroat, Carl E.—**FR**
Shuffett, Rabert L.—**GRN**
Shuffett, William L.—**GRN**
Shufflebarger, Harald—**CTR**
Shuler, Archibald F.—**HO**
Shulthise, Arthur J.—**J**
Shumaker, James L.—**MCRA**
Shuttleworth, William E.—**MU**
Sia. Artura L.—**K**
Siaotong, Winnie B.—**J**
Sides, Paul J.—**GAR**
Siegel, Lyle P.—**HND**
Siehl, Jahn H.—**K**
Sierra, Augustin—**HND**
Sigda, Fred—**HND**
Silanee, Haashang—**C**
Siles, James F.—**K**
Silk, Kenneth L.—**J**
Sills, Jomes G.—**BRK**
Silva, Rogelia A.—**HND**
Silverman, Irving—**J**
Simmons, Jahn W.—**WN**
Simmons, Robert P.—**GRN**
Simmons, Stanley T.—**J**
Simmons, Truman D.—**HRL**
Simon, Ansel V.—**J**
Simon, Frank G.—**J**
Simpao, Valentina S.—**MU**
Simpson, William B.—**GRV**
Simpson, III, Jim S.—**FR**
Simpson, Jr., James H.—**CHR**
Simrall, Jomes H.—**J**
Singayao, Ruben P.—**FLO**
Sinha, Ranjit—**ROW**
Sirkle, Robert M.—**F**
Sisk, Charles W.—**BL**
Sivak, Geargе C.—**J**
Skaggs, Radney A.—**D**
Skaggs, William K.—**SP**
Skipworth, Joseph D.—**CU**
Sklar, Allen L.—**F**
Skolnick, Judah L.—**J**
Slabaugh, Raymond M.—**F**
Slabaugh, Thamas K.—**F**
Slaughter, David P.—**K**
Slaughter, Jaseph C.—**GRV**
Sligar, William M.—**J**
Slizofski, Walter J.—**GRV**
Sloan, Warren E.—**MCRA**
Slucher, Richard R.—**J**
Slusher, Eugene—**F**
Smego, Dauglas R.—**J**
Smiser, H. Tad—**HRS**
Smith, B. Presley—**HAN**
Smith, Barry S.—**J**
Smith, Bruce C.—**SMP**
Smith, Charles S.—**J**
Smith, Cliftan—**F**
Smith, Curtis H.—**AL**
Smith, Edward L.—**K**
Smith, Enas T.—**PUL**
Smith, Francis J.—**J**
Smith, Harriette A.—**J**
Smith, Irvin E.—**MCRA**
Smith, Jomes R.—**SH**
Smith, Jonet L.—**J**
Smith, Jerry R.—**LRU**
Smith, Jahn M.—**LE**
Smith, Jahn R.—**J**
Smith, Karl H.—**ROW**
Smith, Keith P.—**WT**
Smith, Kenneth W.—**BE**
Smith, Ladonna S.—**WRN**
Smith, Mary A.—**J**
Smith, Mary N.—**F**
Smith, Paul R.—**LRL**
Smith, Richard D.—**MCRA**
Smith, Richard F.—**F**
Smith, Rabert C.—**C**
Smith, Rabert E.—**K**
Smith, Somuel A.—**WRN**
Smith, Stanley E.—**J**
Smith, Stephen Z.—**J**
Smith, Tom J.—**J**
Smith, Jr., Charles C.—**J**
Smith, Jr., Orsan P.—**J**
Smock, Jr., E. Frederic—**D**
Snider, Bruce A.—**K**
Snowden, Eugene L.—**CLK**
Snowden, Roymand C.—**CHR**
Snyder, Clarence E.—**CHR**
Snyder, Grace R.—**FR**
Sohi, Gurbachan S.—**J**
Sola, Venkateswara R.—**LA**
Soliman, Jr., Patricia F.—**OWN**
Solinger, Rabert E.—**J**
Songster, Curtis L.—**HRD**
Soni, Vinadchandra S.—**U**
Sonne, Jahn J.—**NL**
Sonne, Lauis S.—**J**
Sopko, Robert G.—**C**
Southard, Jahn B.—**J**
Sowards, Charles F.—**PK**
Spalding, Charles B.—**NL**
Spalding, Henry S.—**NL**
Spalding, William W.—**J**
Sparks, Clyde Cecil—**BD**
Sparrow, Athel Bert—**J**
Sparrow, Jahn C.—**F**
Spaulding, Joe B.—**MCRA**
Spear, Richord C.—**J**
Speer, David L.—**J**
Speevack, Bernard L.—**J**
Speevack, Maher—**HRT**
Spencer, Alec—**MOR**
Spencer, Babbie E.—**J**
Spencer, Dannie R.—**PER**
Spencer, Gary G.—**CHR**
Spencer, Herbert H.—**F**
Spencer, Jr., Eorle E.—**F**
Spires, Stephen M.—**MNT**
Spradlin, Marion Carroll—**PUL**
Sprague, John S.—**F**
Sprague, III, A. Davis—**HND**
Spratt, Jr., Jahn S.—**J**
Spurlin, Geraldine W.—**MAD**
Sridharan, Marandapalli R.—**J**
St. Clair, Harvey R.—**J**
Stacy, Charles B.—**BE**
Stahmann, Fred D.—**F**
Stambaugh, Harry D.—**J**
Stambaugh, James L.—**F**
Stamper, William J.—**MOR**

Stamper, Jr., Daniel H.—**PK**
Standiford, Edward C.—**K**
Stansbury, Rabert A.—**J**
Stapleton, Bruce M.—**BD**
Starr, Rabert R.—**BAR**
Stauffer, Rabert A.—**J**
Stauffer, W. Ray—**F**
Stearns, James M.—**HND**
Steele, A. Arthur—**MRN**
Steffen, Theadare N.—**J**
Stege, Geargе C.—**J**
Stege, III, Geargе C.—**J**
Stein, Orville J.—**PUL**
Steinberg, Sidney R.—**FR**
Steiner, R. W. Prasaad—**J**
Steinfeld, Carrall M.—**HO**
Stemkowski, Paul E.—**BD**
Stepchuck, Walter H.—**HRL**
Stephens, Charles L.—**C**
Stephens, Charles O.—**BOO**
Stephens, Danald R.—**HRS**
Stephenson, Harry C.—**J**
Stephenson, Jaseph E.—**BD**
Stephenson, Stuart F.—**J**
Stephenson, Thamas V.—**J**
Sternberg, Lauis B.—**J**
Sternberg, Steven B.—**K**
Stetten, Maynard L.—**J**
Stevens, David B.—**F**
Stevens, Danald M.—**C**
Stevens, Eliatt P.—**D**
Stevens, Thamas E.—**GRP**
Stevens, Virginia A.—**J**
Stevenson, Richard V.—**LET**
Stevie, Jahn R.—**K**
Stewart, David L.—**J**
Stewart, Jahn P.—**FR**
Stewart, Martha J.—**J**
Stewart, Rabert H.—**J**
Stigall, Ben C.—**F**
Stigall, Rabert W.—**BL**
Stigall, Thamas G.—**J**
Stiles, Jaseph C.—**D**
Stillner, Verner—**F**
Stine, Frederick A.—**C**
Stinnette, Kenneth L.—**NL**
Stites, Frank M.—**J**
Stites, Temple B.—**J**
Stith, James B.—**F**
Stivers, James R.—**J**
Stober, Jahn G.—**J**
Stockwell, Jahn R.—**J**
Stodghill, William B.—**J**
Stodghill, William J.—**MCRA**
Stoeckinger, Jahn M.—**F**
Stokes, Atmur H.—**HND**
Stokes, Jaseph D.—**MU**
Stokes, Jr., Lawell L.—**J**
Stoler, Barry S.—**J**
Stoll, Jr., Walter W.—**F**
Stoltzfus, Richard G.—**HRL**
Stone, Haward—**J**
Stone, James L.—**F**
Stone, Thamas B.—**GRV**
Storey, Benjamin B.—**F**
Storrow, Hugh A.—**F**
Stout, Richard H.—**CAL**
Stoutt, Jr., Glenn R.—**J**
Strand, Karl H.—**PUL**
Stratman, Edward J.—**C**
Straub, James G.—**F**
Strawn, Rabert L.—**K**
Strunk, Danny J.—**PUL**
Stryker, Allan K.—**HO**
Stryker, Winfield—**MCRA**
Stufflebam, Bradley C.—**HO**
Stumbo, Warren G.—**FR**
Sturgeon, Gerald F.—**J**
Stuteville, James H.—**HRD**
Suetholtz, David W.—**K**
Sugar, Darryl M.—**HO**
Sullivan, Clarence F.—**MCRA**
Summay, Dillard R.—**J**
Sumner, Rabert L.—**J**
Sundaram, Raghu R.—**FLO**
Suruda, Anthany J.—**F**
Sutherland, J. Patrick—**J**
Sutkamp, Jerry C.—**C**
Swan, David S.—**F**
Swartz, William T.—**F**
Swartzel, Rabert L.—**C**
Sweeney, Garnett J.—**CSY**
Sweeney, Geargе W.—**CSY**
Sweeney, Jr., Garnett J.—**F**
Sweet, Richard A.—**J**
Sweitzer, Stephen J.—**J**
Swikert, Danald J.—**K**
Swikert, Nancy C.—**K**

T

Tackett, Laddie L.—**MNT**
Tackett, Rabert N.—**BD**
Tagher, Paul L.—**BOO**
Tak, Abdul Rehman—**J**
Talbott, C. Maximilian—**J**
Talley, Nathaniel H.—**CLD**
Tamburro, Carla H.—**J**
Tan, Kak Liang Y. (David)—**HAN**
Tandon, Shashi K.—**CAL**
Tanner, Geargе R.—**C**
Taormina, Vincent—**F**
Tarkington, Charles N.—**F**
Tate, Rabert C.—**J**
Taulbee, Arnald L.—**LE**
Taustine, Llayd R.—**J**
Taylor, Ben H.—**MCRA**
Taylor, Cecil E.—**CLA**
Taylor, Charles R.—**FR**
Taylor, Charles W.—**F**
Taylor, Ellis R.—**F**
Taylor, Frank H.—**HO**
Taylor, Jerry L.—**PK**
Taylor, Paul M.—**HO**
Taylor, Thamas R.—**HRD**
Temes, Gerald D.—**J**
Temple, William J.—**K**
Templeton, III, William C.—**J**
Terhune, J. Nichalas—**CHR**
Terry, Charles E.—**ES**
Theiss, Jr., Chester B.—**J**
Thind, Gurdarshan S.—**J**
Thind, Rajinder K.—**J**
Thomas, Alexander T.—**J**
Thomas, B. Prestan—**J**
Thomas, David P.—**MCRA**
Thomas, Danald M.—**J**
Thomas, J. Kent—**J**
Thomas, Jaan E.—**J**
Thomas, Jahn W.—**J**
Thompson, Darathy J.—**F**
Thompson, Elvis R.—**PK**
Thompson, Jahn S.—**F**
Thompson, Jaseph L.—**J**
Thompson, Leray E.—**J**
Thompson, Malcam D.—**J**
Thompson, Oscar W.—**PK**
Thompson, Rabert B.—**F**
Thompson, Ranald H.—**WRN**
Thompson, Jr., Kearns R.—**F**
Thompson, Jr., Walter L.—**J**
Thomsen, Andreas E. T.—**ROC**
Threlkeld, Thamas G.—**LO**
Thurber, Danald B.—**FR**
Thurman, David H.—**J**
Thurman, Peter L.—**J**
Tibbs, Philip A.—**F**
Tidal, Abubakar H.—**LET**
Tigas, Laurente B.—**GRP**
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Health and Safety Tip From the American Medical Association

MARKERS LISTED TO IDENTIFY ALCOHOLICS

How can you tell that a regular, heavy drinker has crossed over the line and become an alcoholic, who no longer can control his or her drinking?

The American Medical Association in its Manual on Alcoholism points to some markers to help identify the alcoholic.

1. Increasing consumption of alcohol, with frequent, perhaps unintended, episodes of intoxication.

2. Drinking to handle problems or relieve symptoms.

3. Obvious preoccupation with alcohol and the frequent need to have a drink.

4. Surreptitious drinking or gulping of drinks.

5. Tendency toward making alibis and weak excuses for drinking.

6. Refusal to concede what is obviously excessive consumption and expressing annoyance when the subject is mentioned.

7. Frequent absenteeism from the job, especially following weekends and holidays.

8. Repeated changes in jobs, particularly if to successively lower levels, or employment in a capacity beneath ability, education and background.

9. Shabby appearance, poor hygiene, and behavior and social adjustment inconsistent with previous levels or expectations.

10. Persistent vague physical complaints without apparent cause, particularly insomnia, stomach upsets, headaches, loss of appetite.

11. Multiple contacts with the health care system with disorders that are alcohol caused or related.

12. Persistent marital and family problems, perhaps with multiple marriages.

13. History of arrests for drunkenness or drunken driving.

Submitted by the KMA Impaired Physicians' Committee

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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

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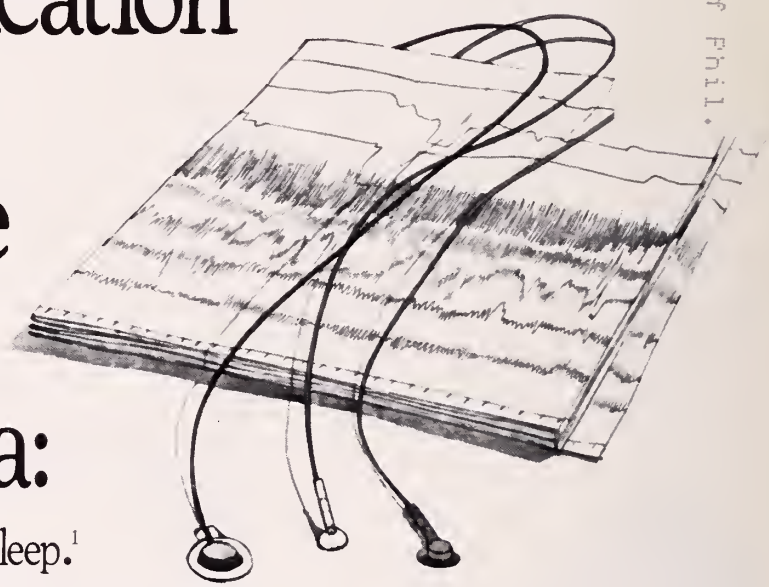
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PRESIDENT'S PAGE



Charles C. Smith, Jr., M.D.

THE office of Vice-President has the advantages of high pay and no work. I have patterned my conduct in office after that of the mother of the groom whose duties, according to a friend of mine, are to "look pretty and wear beige." Then they told me about writing this month's President's Page.

So I would like to share with you work of the Committee on Future Trends in Medicine composed of the following members: Jerry Clanton, M.D., Robert Goodin, M.D., Allen Grimes, M.D., Ed Nighbert, M.D., Joan Rider, M.D., Nelson Rue, M.D. and myself.

Our first task has been to collect information on many subjects pertinent to delivery and insurance of health care, and to seek "intelligence" through the office of Bill Applegate on matters ranging from attitudes of today's medical students and businessmen to the strategic planning of government and large hospital corporations. We have had a fulltime economist from the American Medical Association visit us to talk about competition and its effect on the habits of our practices. We are now conducting our own survey of present-day medical students in Kentucky.

It is clear that the profit (or loss) of many major corporations is related to health insurance costs of employes. This is no longer a "sacred cow" in dealing with employes. Health insurers themselves have no longer a desire to administer 100% coverage usual and customary plans. The federal government wants to shift cost containment of care to the hospitals. The Kentucky State Government seems to want to return to the 1950's in scope of health care available to its citizens. Many groups want to assign primary care of patients to non-physicians. All this comes at a time when we have educated and prepared more and better physicians to care for a larger and older population.

The hazards are apparent for the patient in the form of under-utilization and limitation of access to care. The dehumanizing of the physician-patient relationship by the interposition of more third parties rather than less, coupled with the lowering of professional standards represents an abrupt about face in the history of medicine in this country.

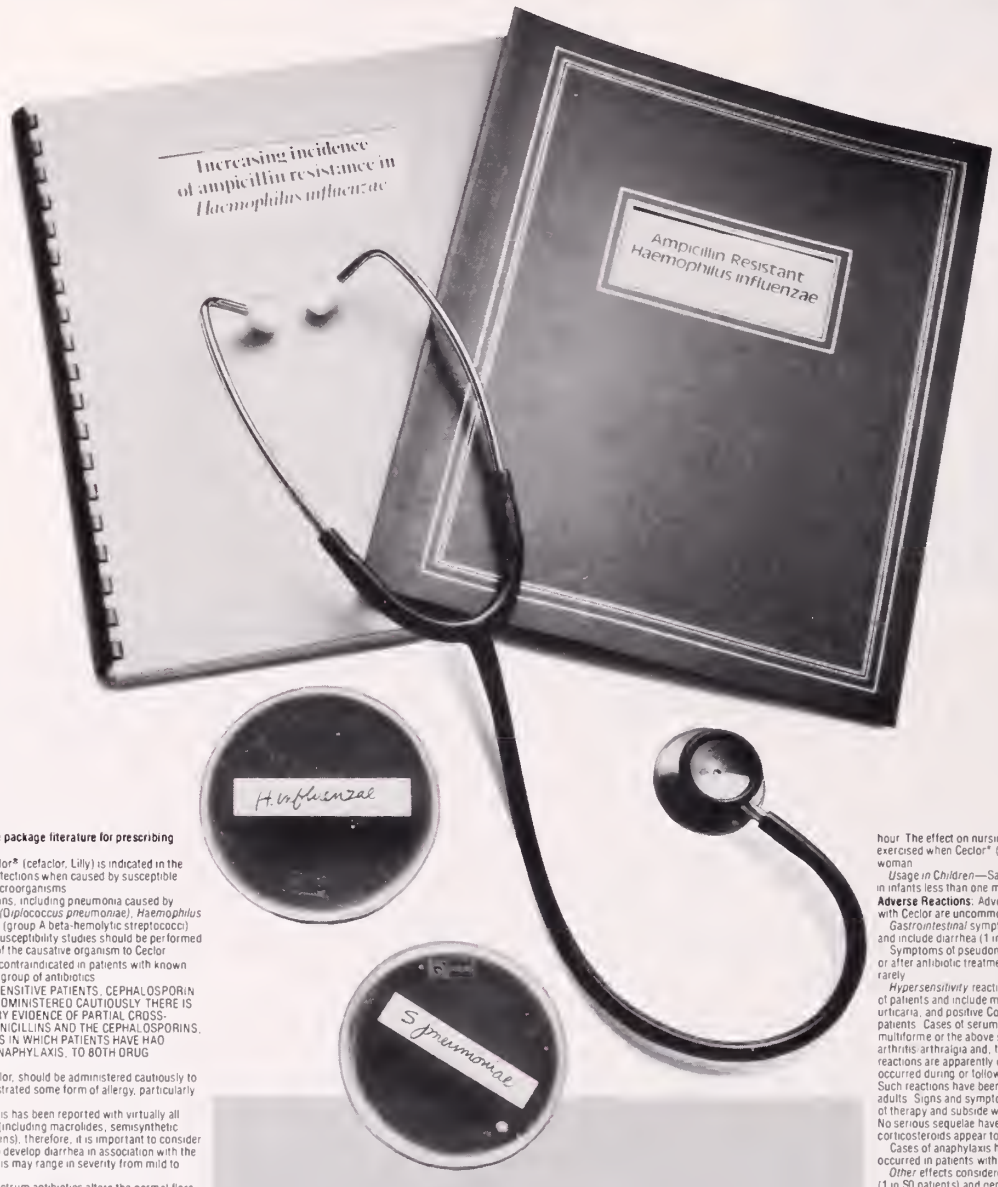
Many voices state that economic factors dictate sweeping changes in the way health care is delivered and that rationing of health care is vital.

The initial changes in delivery systems are historically made in urban areas and the composition of this committee is urban. But the implications for any system developed can be statewide. Though Kentucky has not been a trend-setter in the past the proposed state health plan would change this. Already Citicare is being studied by at least two university-based groups because of its singular nature.

The hazards to our professional and personal relationships with each other are also apparent. The "corporation" practice of medicine, closed hospital staffs, closed panel provider groups, and networks of primary care centers as feeders are new concepts for a lot of us to absorb. The need for definition for all of us in the Association is a task for your committee to achieve.

Charles C. Smith, Jr., M.D.

An added complication... in the treatment of bacterial bronchitis*



Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-5]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor
Pulvules®, 250 and 500 mg

Brief Summary. Consult the package literature for prescribing information.

Indications and Usage Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication. Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions*—If an allergic reaction to Ceclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers—Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor® (cefaclor, Lilly) is administered to a nursing woman.

Usage in Children—Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations of SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

* Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.*

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

References

1. Antimicrob. Agents Chemother., *8*: 91, 1975S
2. Antimicrob. Agents Chemother., *11*: 470, 1977
3. Antimicrob. Agents Chemother., *13*: 584, 1978
4. Antimicrob. Agents Chemother., *12*: 490, 1977
5. Current Chemotherapy (edited by W. Siegenthaler and R. Luthy), II 880. Washington, D.C.: American Society for Microbiology, 1978
6. Antimicrob. Agents Chemother., *13*: 861, 1978
7. Data on file, Eli Lilly and Company
8. Principles and Practice of Infectious Diseases (edited by G. L. Mandell, R. G. Douglas, Jr., and J. E. Bennett), p. 487. New York: John Wiley & Sons, 1979

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

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Traumatic Diaphragmatic Rupture

GARY L. GRIFFITH, M.D. AND EDWARD P. TODD, M.D., PH.D.

Diaphragmatic ruptures occur in 3-4% of patients surviving serious accidents, however this incidence is probably a conservative estimate. The tear results in the creation of a significant pleuroperitoneal, transdiaphragmatic pressure gradient which promotes visceral herniation. Continued relatively negative intrathoracic pressure then tends to complicate the injury. The chest X-ray is the foundation upon which the diagnosis is suspected, but a high degree of clinical suspicion is necessary to make an early diagnosis, thus avoiding late complication arising from visceral incarceration and strangulation. Operative repair may be performed with relative ease either through the chest or abdomen, depending on the circumstances, however one must remain flexible in the management of these patients suffering injuries to multiple organ systems. Repair is best performed during the acute phase using non-absorbable suture techniques. Occasionally synthetic prostheses may become necessary.

"WHEN the Diaphragm or midriffe is wounded, the party affected is troubled with a weight of heavinesse in that place, he is taken with a delerium, or raving by reason of the nerves in the sixth conjugation which are spread over the midriffle; difficulty breathing, a cough and sharpe pain troubled the patients, the gutts are drawne upwards; so that it sometimes happens by the vehemency of breathing, that the stomacke and gutts are drawne through the wound into the capacity of the chest; which thing I observed in two."

This is an excerpt taken from the works of the famous Chirurgeon Ambroise Pare in which his experience in 1568 is described.[1] Actually Sennertus is credited with reporting the first instance of delayed herniation through an injured diaphragm in a postmortem in 1541.[2] Three hundred years later in 1853 Bowditch[3] made the first clinical diagnosis in a living patient, and shortly thereafter the first successful surgical repair was performed by Riolfi in 1886.[4]

This disorder remained relatively obscure until 1969, when Hood[5] reported on 429 patients, the total experience of the English speaking world up to that time. Since Hood's report, a number of other series have subsequently appeared.[6-12] A theme which is common to most of these reports is the surprising difficulty and delay in diagnosis frequently encountered.

The experience encountered at the University of Kentucky during the previous 10 years, which will be presented here, reflects the current trends in the diagnosis and management of this problem.

Clinical Material

Between the years 1971 and 1981, 26 patients were admitted to the University of Kentucky Medical Center in whom the diagnosis of a ruptured diaphragm was subsequently made. The ages ranged from 12 years to 77 years, with an average age of 42 years. Males comprised 85% of the patients. The vast majority (70%) sustained their injuries in motor vehicle accidents. Other modes of injury include: a stab wound, ax handle injury, iatrogenic injury secondary to a thoracic surgical procedure, a gunshot wound, a fall from a tree and a fall from a horse. In two others the cause of injury was undetermined. (Table 1)

Injuries occurred on the left in 65% and on the right in 34%. The average time from injury to diagnosis was 13.4 months, although this figure is skewed by a number of patients who presented at dates considerably after the inciting injuries. (Table 2) In 73% of the patients with initial chest X-ray was considered diagnostic. These were six liver scans performed in patients suspected of right diaphragmatic injuries, and all con-

Table 1

Mode of Injury—Diaphragmatic Injury

Mode	Number
Motor vehicle	18
Fall—Tree	1
Fall—Horse	1
Stab Wound	1
Ax handle	1
Iatrogenic	1
Gunshot	1

*2 patients unable to determine mode of injury

Table 2

Time Interval—Injury to Diagnosis

	Right Diaphragm	Left Diaphragm
Immediate	1	7
≤ 1 week	4	1
< 6 months	1	
6 months → 1 year	2	2
> 1 year	1	4

Table 3

Diaphragmatic Injury—Herniated Organ

Organ	Right Diaphragm	Left Diaphragm
Colon	1	11
Liver	7	
Stomach	1	4
Spleen		2
Omentum	2	
Intestine(s)	1	
Gall Bladder	1	

Table 4

Injuries Associated with Ruptured Diaphragm

Structure	Number
Rib Fracture	11 (42%)
Skeletal Fracture	6 (23%)
Splenic Rupture	6 (23%)
Liver Laceration	3 (12%)
Pulmonary Contusion	3 (12%)
Colon Injury	2 (8%)
CNS Injury	2 (8%)
Renal Laceration	1 (4%)

firmed the presence of liver parenchyma above the diaphragm.

The colon was the organ most commonly contained in the hernia, followed closely by the liver. The stomach was involved in five cases. (Table 3) The most common associated injuries were fractures to the ribs and long bones, but the spleen and liver were the viscera which were most frequently injured. (Table 4)

Thoracotomy alone was performed in eight patients, celiotomy in nine and a combined approach was used in seven patients for operative repair. Two patients refused repair. Sixty-seven percent of patients with ruptures of the right diaphragm underwent thoracotomy alone; the remaining underwent combined procedures. On the left side 64% underwent celiotomy alone, 14% thoracotomy alone, and 22% combined procedures. In those patients in whom the diagnosis of diaphragmatic injury was made on the initial evaluation, 50% underwent repair by celiotomy alone. When the diagnosis was delayed 47% underwent repair by thoracotomy, 26.5% by celiotomy, and 26.5% by combined approaches. There were two deaths in this series, both occurring as a result of sepsis and renal failure associated with multisystem injuries.

Discussion

The incidence of diaphragmatic ruptures secondary to blunt trauma has been estimated at 3 or 4% of patients surviving with multiple injuries, and 4 to 7% of immediate fatalities.[13,14] Unfortunately the true incidence of this problem is probably not fully appreciated, since many of these injuries go unrecognized.

In most series the incidence of left sided rupture far exceeds that on the right, with left sided injuries occurring in 75-90% of the cases.[5,10,11,12] These injuries most frequently occur in the 20-30 year age group, and males are usually involved considerably more frequently than females.[7,9,10,13-15] Automobile accidents are responsible for over 80% of these injuries. The exact mechanism leading to diaphragmatic ruptures remains to be adequately explained. Childress and Grimes theorize that the rupture results from force transmitted to the diaphragm through the abdominal viscera.[16] The relative infrequency of right sided and pericardial diaphragmatic injuries is attributed to the buffering action of the liver and heart with respect to these respective diaphragmatic areas.

Once the injury has occurred it tends to become self-perpetuating. This is felt to occur primarily on the basis of a relatively negative intrathoracic pressure with respect to the intra-abdominal pressure. This gradient may become as high as 100 cm H_2O, with maximal inspiratory effort alone.[17] An additional factor which may contribute to enlargement of small, newly formed rents in the diaphragm concerns the musculature of the diaphragm itself. The muscular insertion into the dome is such that diaphragmatic contraction would tend to favor enlargement of the defect.[6]

Diaphragmatic ruptures have been divided into three phases with respect to their presentation. These are acute, interval and chronic phases.

The acute phase is initiated immediately after the injury. Due to the high association of additional injuries resulting from the initial insult, the injury to the diaphragm is not uncommonly overlooked. This occurred in 28% of the series presented by Sutton.[11] These patients are subsequently discovered on follow-up during the relatively asymptomatic interval phase, or may go on for years only to subsequently present during the chronic phase during which time they become symptomatic, usually as a result of visceral incarceration within the chest cavity.

As a result of the violent force producing a diaphragmatic injury there is a high association of injuries to other organs. A collective review by Hood[5] of 261 patients with traumatic ruptures of the diaphragm revealed a 78% incidence of rib or skeletal fractures, 35% incidence of splenic rupture, 18% incidence of cranial injuries, 15% incidence of gastric, intestinal or pancreatic injuries, and a 9% incidence of hepatic injury.[18]

In patients presenting with this injury, abdominal pain is the most frequent complaint, followed by chest pain and shortness of breath. The spectrum, however, ranges from the relatively asymptomatic (30%) to those in extremis with progressive dyspnea, cyanosis and hypotension (10%). Examination may reveal decreased breath sounds, respiratory distress and shock. The trachea may be deviated away from the involved side. Bowel sounds may be present in the chest. The abdomen may be relatively flat, or have the feeling of emptiness on examination, particularly in those patients with herniation of one or more viscera through a large diaphragmatic defect.

The chest X-ray presently remains the most reliable diagnostic test, although it may be initially considered normal in 19-48%.[6,15,18] Radiographic findings on chest X-ray suggestive of a diaphragmatic disruption include: an arch-like shadow suggesting elevation of the diaphragm, obscuration or irregularity of the diaphragm, extraneous shadows, gas densities or bubbles within the chest, plate-like atelectasis adjacent to the arch-like shadow, pleural effusions or air-fluid levels, and displacement of the heart and mediastinal structures.

Additional studies, which may be of value in confirming the presence of a diaphragmatic hernia, include the use of various contrast studies such as barium or gastrograffin swallow or upper gastrointestinal series. These studies can be used to document the presence of the stomach or the small bowel above the diaphragm. In the emergent situation simple passage of a nasogastric tube may be both diagnostic and therapeutic.[10] The presence of colon may be confirmed by means of a barium enema. The creation of a pneumoperitoneum may also help confirm the presence of a diaphragmatic injury by observing the migration of the air into the chest.[7] If the patient already has a chest tube in place, the insertion of contrast material into the tube may also be useful in delineating possible diaphragmatic injuries.[20] Liver scanning may demonstrate displacement of the liver into the right chest. Recently, computerized axial tomography has also been used successfully to delineate diaphragmatic tears.

Since the vast majority of these patients initially present following serious accidents with multiple associated injuries, great care must be exercised to avoid overlooking this diagnosis. Initial therapy is aimed at stabilizing the patient's condition to allow for systematic evaluation of the associated injuries. A nasogastric tube should be passed to decompress the stomach so as to avoid gastric distention and possible emesis complicating the respiratory status. Quite frequently, diagnostic peritoneal lavage (DPL) may be performed. However, this may be negative in the presence of significant abdominal or diaphragmatic injury. Waldschmidt reported a 25% incidence of false negative DPL with isolated diaphragmatic injuries.[22] Occasionally a patient's condition will rapidly deteriorate solely on the basis of the diaphragmatic injury and herniated viscera. Awaiting stabilization of the patient's condition would be lethal, and early operative intervention becomes a necessity.

In general, once the diagnosis is confirmed, operative repair should be performed as soon as possible. Obstruction and strangulation of the viscera through the hernia may produce an emergency at any time after the initial injury.

Various approaches have been used for exposure and repair of diaphragmatic ruptures and associated injuries. These approaches include thoracic, abdominal, combined thoracoabdominal and sternal splitting incisions.

Since most injuries occur on the left side and are frequently accompanied by injuries to one or more abdominal viscera (9-55%), the use of a transabdominal approach is quite appropriate and allows for adequate exposure for diaphragmatic repair. The patients should be prepped and draped from the shoulders to the groin and placed in a 45° oblique position. If thoracotomy is required this should be performed through a separate incision. Sutures of non-absorbable material should be

placed 1 cm apart and 1 cm from the edge of the defect. On the right side, the presence of the liver frequently interferes with operative repair. Therefore most favor a transthoracic approach for diaphragmatic repair, and perform a separate abdominal incision for abdominal exploration if deemed necessary. In spite of the violent nature of this injury, the liver is only rarely seriously injured.

In case of a chronic or interval hernia, a transthoracic approach is probably best, since this will provide better exposure and allow more ease for mobilization of any adhesions between the lung and incarcerated viscera. Whichever approach is elected, one must take care to obtain adequate exposure or optimize repair. Adhesions to adherent viscera must be carefully lysed, and the margins of the defect must be adequately mobilized.

The majority of these injuries, if detected early, are amenable to simple closure with non-absorbable suture. We prefer using #0 Prolene suture material in an interrupted horizontal mattress suture technique which is then oversewn with a running #0 Prolene suture for hemostasis. Silk and Dacron may also be used, with similar success.

In chronic hernias subsequent stretching of the defect precludes satisfactory primary closure. In these patients, the use of Marlex mesh has been shown to be invaluable.

The mortality for this group of injuries is considerable, most series reporting approximately 20%.[8,10,12,15] Of these deaths, 7.7% occur prior to surgery and 10.5% die either during or immediately after operation. Most fatalities are due to associated injuries.

Conclusion

In conclusion, diaphragmatic injuries are most likely to occur following blunt injuries to the abdomen arising from motor vehicle accidents. Due to the frequent occurrence of injuries to multiple organ systems, great care must be exercised to avoid overlooking injuries to the diaphragm. The chest X-ray remains the single best diagnostic tool available. Operative repair in the acute phase is best accomplished through a transabdominal approach for injuries of the left hemidiaphragm. A combined approach may be required for injuries to the right side. In the chronic phase a thoracic approach usually provides the safest repair.

References 1. Paré A: The Works of That Famous Chirugeon—Ambrose Paré. Translated out of the Latin and compared with the French by Thomas Johnson. London, T. Cotes and R. Young, 1964, Lib. 10 Chap XXX, p. 388. 2. Reid J: Case of diaphragmatic hernia produced by a penetrating wound. Edinburg Med Surg J 53:104, 1840. 3. Bowditch, HI: Diaphragmatic hernia. *Buffalo Med J* 9:1, 65, 1853. 4. Hedblom CA: Diaphragmatic hernia: A study of three hundred and seventy eight cases in which operation was performed. *JAMA* 85:947-953, 1925. 5. Hood RM: Traumatic diaphragmatic hernia. *Ann Thor Surg* 12:311-324, 1971. 6. Andrus CH, Morton JH: Rupture of the diaphragm after blunt trauma. *Am J Surg* 119:686-693, 1970. 7. Brooks JW: Blunt Traumatic rupture of the diaphragm. *Ann Thor Surg* 26:199-203, 1978. 8. Estrera AS, Platt MR, Mills LJ: Traumatic injuries of the diaphragm. *Chest* 75:306-313, 1979. 9. Peck WA: Right sided diaphragmatic liver hernia following trauma. *Am J Roentgen* 78:99-108, 1957. 10. Strug B, Noon GP, Beall AC: Traumatic diaphragmatic hernia. *Ann Thor Surg* 17:444-448, 1974. 11. Sutton JP, Carlile RB, Stephenson SE: Traumatic diaphragmatic hernia. *Ann Thor Surg* 3:136-150, 1967. 12. Ward RE, Flynn TC, Clark WP: Diaphragmatic disruption secondary to blunt abdominal trauma. *J Trauma* 21:35-38, 1981. 13. Orringer MB, Kirsh MM: Traumatic rupture of the diaphragm. Blunt Chest Trauma, General Principles and Management, M.M. Kirsh, H. Sloan, Little, Brown and Co., Boston, 1977. 14. Rodkey GV: The management of abdominal injuries. *S Clinic N A* 46:627-644, 1966. 15. Nano M, Edipoli M, Mossetti C, Maggi G: Traumatic diaphragmatic hernias. *S G & O* 151:191-192, 1980. 16. Childress ME, Grimes OF: Immediate and remote sequelae in traumatic diaphragmatic hernia. *Surg Gynecol Obstet*, 113:573-584, 1961. 17. Marchand P: A study of the forces productive of gastroesophageal regurgitation and herniation through the diaphragmatic hiatus. *Thorax* 12:189-202, 1957. 18. Drews JA, Mercer, EC, Benfield JR: Acute diaphragmatic injuries. *Ann Thor Surg* 16:67-78, 1973. 19. Nelson JW: Traumatic rupture of the diaphragm: a method of diagnosis. *J Can Assn Radiol* 31:99-100, 1980. 20. Cheung D, Meakins JL: Diagnosis of right sided diaphragmatic rupture by liver-lung scanning. *Can J Surg* 23:302-303, 1980. 21. Heilberg E, Wolverson MK, Hurd RN, Jagannadharao B, Sundaram M: CT recognition of traumatic rupture of the diaphragm. *Am J Radiol* 135:369-372, 1980. 22. Waldschmidt MD, Laws HL: Injuries to the diaphragm. *J Trauma* 20:587-592, 1980.

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Chemotherapy for Multifocal Eosinophilic Granuloma of Bone

M. ERNEST MARSHALL, M.S., M.D.

A 44-year-old man with multifocal eosinophilic granuloma of bone, unresponsive to radiation therapy, was treated with bleomycin and vinblastine sulfate. Chemotherapy has effected good control of bone pain for over two years.

EOSINOPHILIC granuloma of bone is the most benign of the "Histiocytosis X" syndromes. While it is most common in childhood or in young adults it may occur in all ages.[1] The typical form of the disease consists of a single (unifocal) lesion that may occur in any bone but is most frequently located in the skull. Multifocal eosinophilic granuloma of bone is a more debilitating form of the disease and is characterized by multiple lytic lesions throughout the skeleton. The affected areas may be severely painful and pathologic fractures are not uncommon. The basic histologic picture is a mixture of histiocytes and eosinophils in varying proportions. The histiocytes may display phagocytosis of erythrocytes, leukocytes, lipid material, hemosiderin and/or cellular debris. The degree of phagocytic activity is a variable feature and may be scant in some cases. The histiocytes vary in size and contain abundant, finely granular, eosinophilic cytoplasm. The degree of eosinophilia within given lesions is also highly variable.[2,3]

The unifocal form of the disease is usually satisfactorily managed with surgery, radiation therapy, and/or chemotherapy.[3-5] Multifocal eosinophilic granuloma of bone presents a more challenging problem. The lesions are too numerous and disseminated to be surgically amenable and the results of radiation therapy are highly variable. Many such lesions are completely resistent to radiation therapy.

The purpose of this report is to describe a patient with severe multifocal eosinophilic granuloma of bone whose lesions were refractory to radiation therapy. His bone pain was successfully managed with chemotherapy.

Case Report

A 44-year-old man presented for evaluation of a painful skull lesion. Radiographic skull series revealed a large lytic defect in the parietal skull (Figure 1). Biopsy of the skull lesion revealed the diagnosis of eosinophilic granuloma of bone. He subsequently received radiation therapy to the involved area of the skull. Radiation improved neither the pain nor the appearance of the skull lesion. Four months later he developed severe pain in the left hip. Radionuclide bone scan revealed areas of abnormal uptake in the skull, pelvis and left femur. Radiographic correlation demonstrated lytic defects in the intertrochanteric area of the left femur, left ischium and both ilia. Bone marrow aspirate and biopsy were normal. He received radiation therapy to the lesions in the pelvis and femur but, again, no improvement was seen in the appearance of the lesions or in the pain. He continued to require frequent narcotics. One month later, because of continued pain, he was started on chemotherapy with cyclophosphamide, vincristine sulfate and prednisone (CVP). Four months of CVP failed to produce any improvement in the bone lesions or the pain and chemotherapy was discontinued.

Seven months later (one year from the time of original diagnosis) he developed a lytic lesion in the roof of the maxilla that penetrated through to the right maxillary sinus. Biopsy of this region confirmed that this process was also due to eosinophilic granuloma. He received radiation therapy to the maxillary region. One month later his symptoms intensified as he developed multiple areas of bone pain including the right scapula, right femur, skull, and several ribs. Skull films showed that two previously identified lesions had en-



Fig. 1: Serial skull radiographs showing the progression of the skull lesion from the time of the original diagnosis (bottom view). From bottom to top the skull views show the progression of the lesion over a period of thirty-three months.



Fig. 2: Serial radiographic views of the pelvis showing multiple lytic defects in the pelvis and proximal femurs. From top to bottom these views span a two year period.

larged and merged to form one large defect in the parietal area (Figure 1). Multiple lytic lesions were demonstrated on rib films. Computerized tomographic scan of the head revealed the brain to be normal but views of the skull showed the large parietal defect to be transcalvarial. Lumbar puncture revealed normal cerebrospinal fluid chemistries and cytology. Bone marrow aspirate and biopsy were normal. Serum and urinary lysozyme levels were normal. He received another course of radiation therapy to the large skull lesion, but, again, no improvement was noted either in the size of the lesion or the symptoms. Following completion of radiation he was treated with three cycles of cyclophosphamide, doxorubicin, vincristine sulfate and prednisone (CHOP). No favorable response was seen and CHOP was discontinued.

Three months later (17 months from the time of diagnosis) he was referred to the author for further management. His disease had progressed to involve skull, scapulae, multiple ribs, numerous vertebral bodies, multiple areas within the pelvis, both hips and femurs (Figures 2 and 3). His pain was nearly constant and frequent narcotic use effected incomplete control.

He was treated with bleomycin 15-30 u. and vin-



Fig. 3: Radiographic view of hips showing extensive lytic defects over two and a half years from the time of diagnosis.

blastine sulfate 10 mg. This regimen produced marked improvement in pain within 48 hours of his first dose. For 26 months he has received repeated courses intermittently for severe bone pain. Success of the regimen is measured by his subjective report of improvement in pain, increased functional status and decreased narcotic use. Duration of response has varied from two to seven months between treatments. While these drugs have produced significant palliation of pain they have not produced significant changes in the radiographic appearance of his bone lesions.

Discussion

"Histiocytosis X" is the term coined by Lichtenstein in 1953 to bring Letterer-Siwe disease, Hand-Schuller-Christian disease, eosinophilic granuloma of bone, and intermediate varieties, into a single nosologic category. Eosinophilic granuloma of bone is at the more benign end of the spectrum of Histiocytosis X syndromes. It is a disease in which single or multiple bones are involved with an infiltrative process composed of histiocytes and eosinophils. There is no extra-skeletal involvement and the prognosis is generally good.[2,3] The etiology of the disease is unknown. Eosinophilic granuloma of bone is an uncommon disease and its true incidence is unknown. While it may occur at any age it is found most commonly in the first three decades of life with a peak incidence between the ages of 5-10 years.[2,3,6] There is a slight male predominance with a male:female ratio of about 3:2.[3]

Eosinophilic granuloma of bone is the most common of the Histiocytosis X syndromes. Greenberger *et al*[7] estimated that eosinophilic granuloma accounted for 60-80% of all cases of Histiocytosis X. Approximately 85% of all cases of eosinophilic granuloma of bone are **unifocal**, with the **multifocal** (diffuse; polyostotic) form accounting for only 15% of the cases.[6]

While any bone may be involved by this process, the most common site is the skull,[6,8] followed in order by the scapula, pelvis and mandible.[8] When the skull is involved the lytic lesions are almost invariably in the membranous bones of the calvarium but they may rarely involve the base of the skull.[6,9] Of 27 cases of cranial eosinophilic granuloma reported by Arseni *et al*[6] nine were localized to the frontal bone, eight in the parietal bone, three in the occipital bone and one in the temporal bone. Two cases were orbital, one fronto-orbital, one in the base of the skull in the parasellar region and one in the left occipital and petrosal bone. One case had a left frontal subdural localization with chronic subdural hematoma. Miller *et al*[9] reported a single case with the lesion located in and around the foramen rotundum.

When skull lesions are transcalvarial there may be subsequent extension of the disease into the central nervous system. Central nervous system involvement may produce diabetes insipidus or, more rarely, hypogonadism. In such cases histiocytes may be demonstrated cytologically in the cerebrospinal fluid.[10]

Unifocal eosinophilic granuloma of bone is usually easily managed with surgery, radiation therapy and/or simple chemotherapy (usually vinblastine sulfate).[2,4] **Multifocal** eosinophilic granuloma of bone poses a more difficult problem of management. The responsiveness of these lesions to radiation therapy is highly variable and local recurrence of the lesion following radiation is a common problem. Most authors have advocated low dose radiation to these lesions. In reviewing their experience with 127 patients with eosinophilic granuloma of bone Greenberger *et al*[7] commented that doses of less than 600 rad were adequate for local control of most non-debilitating bone lesions in non-weight-bearing bones. Higher doses (600-1,500 rad) were required for large lesions.

The patient in the present report received radiation therapy to several large, painful, lytic lesions with no demonstrable response radiographically and with no improvement in pain. This is a common problem with this disease and such cases require chemotherapeutic management. Several authors have reported successes with the use of vinblastine sulfate.[3-5,11] Vinblastine sulfate has proved useful in abating bone pain and has produced good partial remissions radiographically in some patients. One patient with widespread multifocal eosinophilic granuloma of bone actually achieved a complete response with single agent vinblastine sulfate therapy.[5]

In the present report bleomycin was combined with vinblastine sulfate resulting in prompt relief of bone pain following each dose. This is the first reported use of this combination of drugs for eosinophilic granuloma of bone. Further experience with this rare disease may produce multi-drug regimens with higher complete response rates.

References 1. Kirtane JM, Kirtane MV, Karnik PP: Eosinophilic granuloma of the temporal bone. Its clinical manifestations and management. *J Postgrad Med* 24:50-54 (1978). 2. Lieberman PH, Jones CR, Dargeon HWK, Begg CF: A reappraisal of eosinophilic granuloma of bone, Hand-Schuller-Christian syndrome and Letterer-Siwe syndrome. *Medicine* 48:375-400 (1969). 3. Mickelson MR, Bonfiglio M: Eosinophilic granuloma and its variations. *Orthopaedic Clin N Amer* 8:933-945 (1977). 4. Marshall ME: Breast carcinoma, eosinophilic granuloma of bone and dermatomyositis in a single patient. (In press). 5. Kondi ES, Deckers PJ, Gallitano AL, Khung CL: Diffuse eosinophilic granuloma of bone. A dramatic response to Velban therapy. *Cancer* 30:1169-1173 (1972). 6. Arseni C, Danaila L, Constantinescu A: Cranial eosinophilic granuloma. *Neurochirurgia* 20:189-199 (1977). 7. Greenberger JS, Jaffe N, Crocker AC: Dose response relationships in radiation therapy of 127 patients with multifocal eosinophilic granuloma, Hand-Schuller-Christian disease, and Letterer-Siwe disease. *Int J Rad Oncol Biol Phys* 4(suppl 2):81 (1978). 8. Ennis JT, Whitehouse G, Ross FGM, Middlemiss JH: The radiology of the bone changes in histiocytosis X. *Clin Radiol* 24:212-220 (1973). 9. Miller C, Lloyd TV, Johnson JC, Hunt WE: Eosinophilic granuloma of the base of the skull. *J Neurosurg* 49:464-466 (1978). 10. Hamilton SR, Gupta PK, Marshall ME, Donovan PA, Wingard JR, Zaatari GS: Cerebrospinal fluid cytology in histiocytic proliferative disorders. *Acta Cytologica* 26:22-28 (1982). 11. West WO: Velban as treatment for diffuse eosinophilic granuloma of bone. *J Bone Joint Surg* 55-A:1755-1759 (1973).

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Parasites in Kentucky: The Past Seven Decades

JERRY E. JONES, M.D., M.S.

The parasites and people of Kentucky have shared a mutual existence for literally hundreds of years. However, only during the past seven decades have parasitic diseases been considered a major health problem among the people of Kentucky. The purpose of this article is to review the problem of parasites in Kentucky during this 70-year period. It will focus on the chronological sequence of investigations and concerns surrounding parasitic diseases endemic to the State of Kentucky. It is hoped that this review will provide insight and understanding into this yet common and continual problem, ie *parasites in Kentucky.*

The First Decade

In 1910, the Surgeon General of the U.S. Army pointed out that a large proportion of the recruits from Kentucky were infected with hookworm.[1] This report stimulated an interest at the state level to investigate this finding further. The Kentucky State Department of Health, (at this time located in Bowling Green, Kentucky), was able to obtain a small appropriation in 1911, and began a systemic investigation as to the existance of hookworm disease within the State. The first general notice of this activity was published in the *Kentucky Medical Journal*, January 1911.[2] The opening statement of this article read: "The State Board of Health is quietly-accumulating evidence as to the wide-spread existence of this disease (hookworm) in Kentucky. While definite results are not yet completed, sufficient data has been gathered to convince the Board that this form of intestinal parasitic infection exists almost all over the state."

Further interest was stimulated by an article appearing in the *Kentucky Medical Journal* two months later by an accepted authority on the subject.[3] This article pointed to the general neglect of physicians toward hookworm disease and admonished physicians to become more cognizant of its existence.

The initial results of the State Board of Health were published in March 1912.[1] The Board found the presence of hookworm disease in 25 counties. (Figure 1) The counties studied were widely distributed throughout the state. By August of 1912, hookworm had been demonstrated in 69 counties. The report stated that hookworm was more prevalent among whites, than negroes, males more often infected than females, and that children and young were the greatest sufferers. It was also noted that most cases detected were among comparatively healthy people who had been sufficiently well nourished to conceal most of the symptoms.

National attention had been focused on the problem of hookworm disease by the Rockefeller Foundation. A research fund had been made available by the Foundation to study hookworm disease. The fund established a "Sanitary Commission for the Erradication of Hookworm Disease."[4] Part of this national study included Kentucky. For the years 1912-1914, intensive study was made in 26 counties of Kentucky. (Figure 2) A total of 78,887 stool specimens were examined. Overall, the percent infection with hookworm was found to be 37.4%. The rates varied in different areas of the state, being highest in the counties in the mountainous areas having sandy soil, and lowest in the areas in which surface sand was seldom found.

During the Rockefeller study period, a publication appeared in the *Journal of the American Medical Association* entitled: "Intestinal Parasites in the South."[5] This article was the first to report on additional types of intestinal parasites in Kentucky. *Ascaris lumbricoides* was first, with 42.8% positive, followed by hookworm 40.9%, followed by *Trichoecephalus dispar (Trichuris trichiura)* 15.4%, and *Hymenolepis nana* .9%.

Unpublished data[6] from the Rockefeller Foundation for this early period, also found ascaris to be present in 31.7% of 80,564 individuals examined. This paralleled the rates identified by Woods.[5]

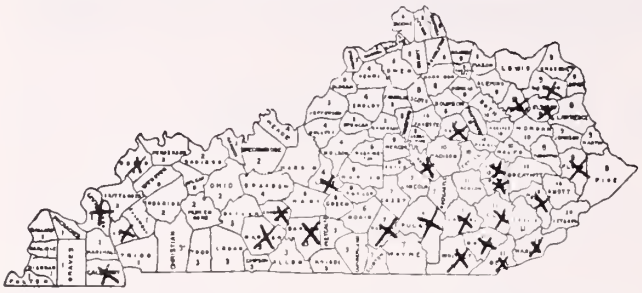


Fig. 1: The first systematic investigation of hookworm disease occurred in the counties marked with X's. All counties studied were found to have hookworm.

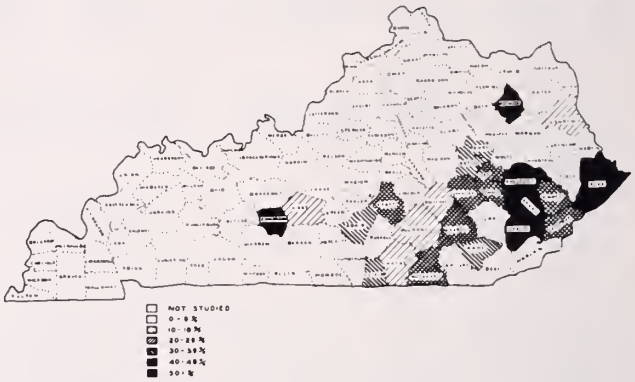


Fig. 2: More refined studies reported various rates of infection for the different counties. This figure depicts data from the Rockefeller Foundation studies for the years 1912-1914.

Thus, by the close of the first decade, hookworm was considered to be the major parasitic disease in Kentucky. Other intestinal parasites were recognized, but largely as a result of investigating the extent of hookworm disease.

The Second and Third Decades

Evaluating the impact that the Rockefeller Sanitary Commission had in Kentucky was delayed by the first world war. It was not until the 1930's that reports from follow-up studies concerning hookworm in Kentucky began to appear. Initiated in the late 1920's, these reports reflect extensive study regarding hookworm, as well as other roundworm species.

G. F. Otto,[6] (John Hopkins University, School of Hygiene and Public Health) was the first to re-study Kentucky. He suggested that the hookworm area was geologically, a continuation of the sandstone foundation of the Cumberland Plateau of Tennessee. He reported that the highest rates of Hookworm infections were found in mountaineers living in narrow valleys and hollows with sandy, shaded soil. In one report, Otto[7] found a 40% positive rate for hookworm and a 50% positive rate for Ascaris. In this study, he reported worm burdens to be extremely heavy, comparable to those found in tropical counties. Otto pointed out the isolated and unsanitary conditions of the study area.

The difficulty with treating hookworm and Ascaris was identified by Otto and Cort.[8] After a treatment period among school children, Ascaris infestation returned nearly to its pre-treatment level in five months. Hookworm reduced about 75% by treatment, returned to about 50% of its pre-treatment level in eight months.

In 1934, Otto and Cort[9] published their results on the distribution and epidemiology of human Ascaris in the United States. Concerning Kentucky they stated: "As previously noted, it was in certain counties in the Kentucky mountains that we found the most widespread and intense Ascaris infestations of all our surveys in the southern United States. That this was due chiefly to the almost complete isolation of these people, which associated with an almost complete absence of any conception of proper household sanitation . . ."

In 1935, Otto[10] reported on infection with the dwarf tapeworm, *Hymenolepis nana.* He reported highest rates in the mining camps in the Kentucky mountains. He reported a 9 to 10% incidence in the camps, compared to a 3 to 4% incidence in a rural mountain population, compared to a fraction of a percent outside the mountain areas of Kentucky.

The centers of hookworm disease in Kentucky were characterized further by Otto[11] in 1936. Eleven counties were listed, and a comparison of the incidence of hookworm was made between the Rockefeller Foundation studies (1914), records of the laboratory of the Kentucky State Board of Health, and the author's data. He reported that the incidence of hookworm had dropped during the two decades. However, he continued to point out that heavy hookworm infections still existed in some rural areas of Kentucky.

Paralleling Otto's work; Keller, Leathers, and Jensen[12] (Vanderbilt University, Department of Preventative Medicine and Public Health) reported in 1936 their work on hookworm disease in Kentucky. They surveyed 36 counties of Kentucky. Of the 23,964 specimens examined, 2,045 or 8.6% showed the presence of hookworm. At least one positive specimen was obtained from individuals residing in each county, suggesting to them a wide distribution of hookworm throughout middle and eastern Kentucky. They reported a marked variation in the incidence of hookworm in different counties, the figures ranging between

Fig. 3: Later studies concluded that the frequency of hookworm had markedly decreased by the late 1930's. This figure relates the data on rates from the early major study periods. Kentucky is shown to have the highest percentage reduction.

Adjusted prevalence rates of hookworm in the rural white population of the surveyed counties of six southern states, 1910-1914 and 1930-1938

State	Percent of Rural White Population of State Represented by Surveyed Population		Prevalence Rates* Percentage		Prevalence Rates† 1930-1938 Adjusted for 1910 Population	Percentage Reduction
	1910-1914	1930-1938	1910-1914	1930-1938		
Alabama	58.1	100.0	35.5	15.1	16.3	54.1
Kentucky	23.3	36.2	36.9	7.9	7.7	79.1
Mississippi	72.3	67.9	51.7	15.9	15.6	69.8
N. Carolina	68.3	67.3	38.1	11.4	11.7	69.3
S. Carolina	81.0	95.7	38.7	15.3	14.9	61.5
Tennessee	47.0	74.8	22.9	3.9	4.3	79.0
Total			36.6	11.2	11.6	68.3

* Adjusted for relative distribution in surveyed counties.
† Based on data for counties examined in both time periods only.

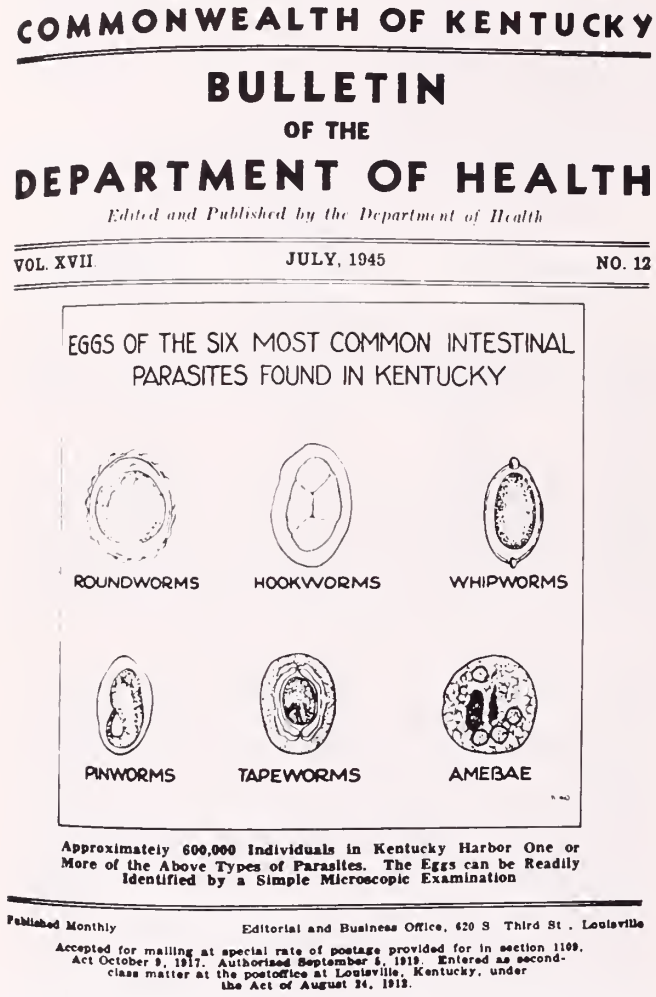
0.6 to 5.0% for eight counties of south central and western Kentucky, and 3.2 to 33.2% for counties in the eastern part of the state. They studied the distribution of cases in relationship to soil areas, and found hookworm the highest where the soil contained large amounts of sand or sandy loam. They concluded that hookworm was limited to certain small areas, and that a dramatic decrease in incidence had been made since the Rockefeller studies. They felt that in Kentucky, there had occurred a decrease of 79.1% in the incidence of hookworm, (Figure 3) and that hookworm involved only 16.2% of the total population residing in the 36 county area studied.

Keller and Leathers[13] extended their report in 1936, by summarizing their findings regarding other intestinal worms. A total of 23,964 specimens were examined from 8,368 white families in 641 rural communities. Of this number of specimens, 34.7% contained Ascaris eggs. The counties in the eastern section had an average incidence of 40.8% while those in the south central and western Kentucky had an average incidence of 16.6%. The peak age for infection was noted to be among the five to nine year olds, and there was not a decline until the age of 20 years. *Trichuris trichuira* was found in 10% of the specimens, *Hymenolepis nana* in 2.7%, and *Hymenolepis diminuta* was rarely found. It was commented that although there had been a decrease in the occurance of hookworm, there had not been a decrease in the incidence of Ascaris.

This period, 1920-1940, was summarized by Keller *et al*[14] in an article published in 1940. Their review stated that a "substantial reduction" had occurred in the incidence of hookworm in each of the southern states, Kentucky included. They felt that this reduced incidence should be regarded as residual endemic rates. Concern was expressed over certain localities where hookworm could remain a serious problem.

The 1940's

During the years of the second world war, very little was published from Kentucky regarding intestinal parasites. Headlee and Cable,[15] from Purdue University published a study involving Berea College students. They examined 2,393 individuals during the years 1936 to 1940. Their study was the first to examine for intestinal protozoa, as well as intestinal helminths. Of those examined, 1620 or 67.7% were from 67 Kentucky counties. The incidence of infection with protozoa of one or more species, was 69.5%; that of helminths of one or more species 25.2%; while 19.2% were infected with one or more species of both protozoa and helminths. When all infections were considered, the incidence of infection was found to be 75.5%. *Entamoeba histolytica* (amebiasis) was found in 5%; *Giardia lamblia*, 5.7%; *Ascaris lumbricoides*, 5.1%; *Trichuris trichiura*, 7.9%; hookworm, 14.6%; *Strongyloides stercoralis*, 3.8%; *Enterobius vermicularis*, 0.4%; and *Hymenolepis nana*, 2.5%. The authors expressed con-



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EGGS OF THE SIX MOST COMMON INTESTINAL PARASITES FOUND IN KENTUCKY

ROUNDWORMS HOOKWORMS WHIPWORMS

PINWORMS TAPEWORMS AMEBAE

Approximately 600,000 Individuals in Kentucky Harbor One or More of the Above Types of Parasites. The Eggs can be Readily Identified by a Simple Microscopic Examination

Published Monthly Editorial and Business Office, 620 S Third St . Louisville

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Fig. 4: The first clinical review for the practicing physician appearing in Kentucky literature.

cern over the rate of amebiasis. In addition, they noted the incidence of *Ascaris lumbricoides* and hookworm was considerably lower than that of the general population in the areas from which many of the students came.

In July of 1945, Teague[16] published the first practical, clinical review of the common intestinal parasites in Kentucky. (Figure 4) He estimated that approximately one-fifth of the total population of Kentucky harbored intestinal parasites. He did recognize a definite downward trend in the incidence of certain parasites all over Kentucky, but expressed concern that the incidence remained high in 25 mountainous counties. He reviewed records from the State Department of Health Laboratory for the four year period 1940-1944. He reported that 7,499 stool specimens were submitted and 2,411 or 32.2% were positive for intestinal parasites. Of those positive, 30% were hookworm; 46% were *Ascaris lumbricoides;* 16.2% were *Trichuris trichiura;*

Fig. 5: Reproduced, with permission, from the Center for Disease Control: Intestinal Parasite Surveillance Annual Summary 1977, Issued September 1978.

INTESTINAL PARASITES FROM KENTUCKY
1978

Rank Order:	
1. Giardia lamblia	181 / 4.8%
2. Trichuris trichiura	138 / 3.7%
3. Ascaris lumbricoides	131 / 3.5%
4. Strongyloides stercoralis	32 / 0.9%
5. Enterobius vermicularis	32 / 0.9%
6. Entamoeba histolytica	9 / 0.2%
7. Hookworm	3 / 0.1%

Kentucky Stool Exam's: for year 1978	# 3,743	+ 730	% 19.5

Non-Pathogens (protozoa) 379/10.1%

Adapted from Center for Disease Control: Intestinal Parasite Surveillance Annual Summary 1977, Issued September 1978.

4% were *Hymenolepis nana* (dwarf tapeworm); 3.4% were *Enterobius vermicularis;* .37% were *Taenia saginata;* and only .125% were positive for amebic dysentery. The author went further to discuss the life-cycles, transmission and clinical symptoms. The six most common intestinal parasites listed in his review were: roundworms, hookworms, whip worms, pinworms, tapeworms, and amebae.

1950's and 1960's

Nothing further appeared until 10 years later, when Atchley *et al*[17] published an article entitled: "Current Status of Intestinal Parasitism of Man in Eastern Kentucky." They conducted a study in two Kentucky counties during 1955. Approximately two-thirds of the 843 specimens examined for both intestinal protozoa and helminths were collected from children less than 10 years old. *Entamoeba histolytica* was found in 3.3%; *Ascaris lumbricoides* in 27%; *Trichuris trichiura* in 25%; *Strongyloides stercoralis* in less than 1%. Most strikingly, no evidence of hookworm was reported. An additional 1800 examinations for the presence of intestinal helminths conducted later that year, found Ascaris the most prevalent form with one out of every three children under the age of 10 infected. Levels of *T. trichiura* and *Strongyloides stercoralis* were felt to be of clinical importance. Little clinical importance was attached to *Entamoeba histolytica.*

Ten years later another study appeared regarding

Fig. 6: A composite table of past studies regarding parasites in Kentucky. The specific species is listed across the top with the author and reference on the left. The frequency of any species can be followed using the columns for the seventy year period.

REFERENCE	YEAR	TYPE (Spec = Specimens, I.P = Individual Patients)	NO.	PARASITES REPORTED (PERCENTAGE) HOOKWORM	A. LUMBRICOIDES	T. TRICHIURA	S. STERCORALIS	E. VERMICULARIS	G. LAMBLIA	E. HISTOLYTICA	H. NANA	TAENIA SP.	E. NANA	E. COLI	I. BUTSCHLII	C. MESNILI	
Biennial Rep[1]	1910-11			28													FIRST DECADE
Rockefeller Report[4]	1912-15	Spec.	78,887	37.4	31.7												
Wood[5]	1912	(Ratio)		40.9	42.8	15.4					.9						
Otto[7]	1912-21	Spec.	80,564	31.7													
Otto[7]	1931	Spec.	5,000	40	50												SECOND & THIRD DECADES
Otto[9]	1934	Spec.															
Mountain			52,578		41.4												
Foothill			10,770		23.7												
Plains			16,216		7.5												
Otto[10]	1935										10						
Otto[11] Age Related	1936	Spec.	6,000	7-38													
Keller[12]	1936	Spec.	23,964	3.8													
Keller[13]	1936	Spec.	23,964		34.7	10											
Keller[14]	1940	I.P.	23,964	7.7													
Headley[15] (College)	1942	I.P.	2,393	14.6	5.1	7.4	3.8	0.4	5.7	5							FOURTH DECADE
Teague[16]	1945	Spec.	7,499	30	46	16.2		3.4		.125	1.4						
Atchley[17]	1956	Spec.	843	0	26.8	24.2	1.2	0.7	9.5	3.3	1.3		5.9	21	0.6	0.5	FIFTH & SIXTH DECADE
		I.P.	1,800	0.5	21.3	14.6	2.6										
Fulmer[18] 3 counties	1965	Spec.	366	4	49	55	4										
		Spec.	125	4	38	41	4										
		Spec.	120	0	17	2	0										
Gloor[19] 1 County	1970	Spec.	439	14.8	7.7	4.8	0	rare		0	rare						SEVENTH DECADE
Jones[20,21]	1975	Spec.	604	4.3	12	12	1.1	0.6									
		I.P.	79	2.5	15	1.2	1.2	8.9									
CDC[22]	1977	Spec.	2,773	0.1	3.5	4.7	1.1	0.6	5.4	0.3							
CDC[23]	1978	Spec.	3,743	0.1	3.5	3.7	0.9	0.9	4.8	0.2							
Walzer[24]	1981	Spec.	1,110				2.5										

parasites in Kentucky. Fulmer and Huempfner[18] (University of Kentucky, Department of Community Medicine) reported results from a survey in three rural counties. Introducing their paper they stated: "Hookworm disease is rarely seen today in hospitals of Kentucky. Only occasionally are hookworm eggs found in specimens submitted to the State Health Department laboratories in Frankfort. On the other hand, it is very common to find *Ascaris lumbricoides* or *Trichuris trichiura* in stool samples of both hospitalized patients and members of the community, particularly children." Their survey was limited to school age children in the three Eastern Kentucky counties. Prevalence rates for Ascaris ranged from 22 to 60%. Trichuris rates similarly ranged from 6 to 67%. Hookworm and *Strongyloides* infections were found in small numbers.

Five years later, a report by Gloor *et al*[19] was published on the study of hookworm from one Eastern Kentucky county. Their study included 1,246 elementary students enrolled in grades 5 through 8. This

represented 35% of the total students enrolled. Ninety-seven, or 22.1% of those examined, were positive for one or more intestinal helminth. The most common parasite found was hookworm, in 14.8% of those examined. Other species reported were: *Ascaris*, 7.7%; *Trichuris*, 4.5%; *Enterobius* and *Hymenolepis nana* rarely. No Strongyloides larvae were noted.

In the mid-1970's, this author reviewed records at the state laboratory for a six county area.[20] Of more than 600 examinations done for ages less than 18 years, 146 individuals were positive for at least one intestinal parasite. *Ascaris* and *Trichuris* were equally reported with hookworm being third. *Strongyloides* and hookworm were also reported, but in small numbers. In addition, a small sample of individuals were examined for intestinal parasites for the same six county area.[21] Again *Ascaris* was found to be present along with other four intestinal roundworms.

Centers for Disease Control published information 1978[22] and 1979[23] regarding parasite surveillance in the United States. This information consisted of data from public health laboratories on the frequency of intestinal parasites diagnosed at each laboratory. For the year 1977[22] in Kentucky, 2,773 stool specimens were examined. Of those examined, 804 or 29% were positive for an intestinal parasite. Overall, the most frequently encountered were non-pathogenic. Of the pathogenic species, *Giardia lamblia* was number one, 5.4%; followed by *Trichuris*, 4.7%; then *Ascaris* 3.5; (Hookworm), *Strongyloides*, *Enterobius* and *Entamoeba histolytica* were also reported.

For the year 1978[23] little change occurred. Three thousand-seven hundred and forty-three specimens were examined and 730, or 19.5% were positive. Again *Giardia lamblia* were most commonly reported. (Figure 5)

The most recently published article by Walzer[24] expressed concern over the chronic impact of *Strongyloides stercoralis*. By case presentation, the author reports the experience at the University of Kentucky in treating this parasite. Strongyloides was reported to occur in approximately 2.5% of the stool specimens examined at the medical center.

Summary

Parasites have existed endemically in Kentucky for hundreds of years. However, it was not until the turn of the 19th Century, when hookworm became recognized, that parasites were a concern for the state. Earliest studies focused on hookworm; its diagnosis, treatment and prevention. The widespread distribution of other intestinal parasites, particularly roundworms and tapeworms, was recognized and studied extensively in the 1920's and 1930's. A clear picture of the distribution and associated environmental factors was identified. By World War II, the widespread acceptance of intestinal parasites in Eastern Kentucky had been established. What followed over the next 40 years reflected concepts and data established previously. Fewer and less extensive studies were done. The later studies left the impressions that, 1) hookworm disease was basically eliminated, 2) that *Ascaris* and *Trichuria* have remained essentially unchanged during the 70-year period, (Figure 6) and 3) that the chronic nature of *Strongyloides* with its potential lethal effects be considered an important health problem.

However, very little information is available concerning the intestinal protozoa. Nationally, *Giardia lamblia* has replaced all intestinal parasites as the most frequently identified. Literature for Kentucky[15,17,22,23] suggests that the frequency of this organism has changed very little. Further evaluation is needed in Kentucky regarding this organism since this species may prove to be the next parasitic problem in the state.

References 1. Bulletin of the State Board of Health of Kentucky. Biennial Report, 1910 and 1911; Vol II, No II, p 54, published March 1912. 2. Hookworm Disease. *Kentucky Medical Journal* Vol 9, p 2, 1911. 3. Arnold WF: Hookworm Disease in the South: Its Neglect. *Kentucky Medical Journal* Vol. 9, p 227-229, 1911. 4. Rockefeller Sanitary Commission For the Eradication of Hookworm Disease, Annual report, First to Fifth, October 1909 to December 1913, Washingtton, 1911-1914. 5. Wood HB: Intestinal Parasites in the South. *J Am Med Assoc* 59:1707-1708, 1912. 6. Otto GF: Studies on Hookworm Infestation in Kentucky. *Journal of Parasitology* Vol 17:112, 1930. 7. Otto GF: Hookwork and Ascaris in Kentucky. *Journal of Parasitology* Vol 18:51, 1931. 8. Otto GF and Cort WW: Post-treatment Infestation with Ascaris and Hookworm in Kentucky. *Journal of Parasitology* Vol 19:179, 1932. 9. Otto GF and Cort WW: The Distribution and Epidemiology of Human Ascariasis in the United States. *Amer J Hyg* 19:657-712, 1934. 10. Otto GF: Human Infestation with the Dwarf Tapeworm. *Journal of Parasitology*, Vol 21:443-444, 1935. 11. Otto GF: Localized Centers of Hookworm Disease in Kentucky and North Carolina. *Am J Hyg* Vol 23:157-168, 1936. 12. Keller AE, Leathers WS and Jensen MH: An Investigation of Hookworm Infestation in Thirty-Six Counties of Kentucky. *Amer J Hyg* Vol 23:33-45, 1936. 13. Keller AE and Leathers WS: The Incidence and Distribution of Ascaris Lumbricoides, Trichuris Trichiura, Hymenolepis nana, and Hymenolepis diminuta in Thirty-Six Counties in Kentucky. *Amer J Hyg* Vol 23:216-230, 1936. 14. Keller AE, Leathers WS and Densen PM: The Results of Recent Studies of Hookworm in Eight Southern States. *Am J Trop Med* Vol 20:493-509, 1940. 15. Headler WH and Cable RM: Intestinal Parsitism Among Students of Berea College, Kentucky. *Am J Trop Med* Vol 22:351-360, 1942. 16. Teague RE: The Common Intestinal

Parasites in Kentucky. Bulletin of the Department of Health, Commonwealth of Kentucky, Vol 17: 12, 431-439, 1945. 17. Atchley FO, Hemphill EC and Hunt DW: Current Status of Intestinal Parasition of Man in Eastern Kentucky. *Journal of Parasitology*, 42:505-509, 1956. 18. Fulmer HS and Huempfner HR: Intestinal Helminths in Eastern Kentucky: A Survey in Three Rural Counties. *Am J Trop Med Hyg* 14:269-275, 1965. 19. Gloor RF, *et al:* Hookworm Infection in a Rural Kentucky County. *Am J Trop Med Hyg* 19:1007-9, 1970. 20. Jones JE: Prevalence of Intestinal Helminths in a High Risk Population of the Kentucky River District. Unpublished data. 1975. 21. Jones JE: Indentification of Intestinal Nematodes Using the Digital Rectal Examination. *J Fam Prac* 12:563-565, 1981. 22. Center for Disease Control: Intestinal Parasite Surveillance Annual Summary 1977, Issued September 1978. 23. Center for Disease Control: Intestinal Parasite Surveillance Annual Summary 1978, Issued August 1979. 24. Walzer PD: Intestinal Parasitism in Kentucky: An Important Medical and Public Health Problem. *J Ky Med Assoc* 79: 2, 95-98, 1981.

University of Kentucky, College of Medicine, Department of Family Practice, 915 South Limestone, Lexington, Kentucky 40503. *Adapted from paper presented: Kentucky Medical Association, September 23, 1982.*

Health and Safety Tip From the American Medical Association

MARKERS LISTED TO IDENTIFY ALCOHOLICS

How can you tell that a regular, heavy drinker has crossed over the line and become an alcoholic, who no longer can control his or her drinking?

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2. Drinking to handle problems or relieve symptoms.

3. Obvious preoccupation with alcohol and the frequent need to have a drink.

4. Surreptitious drinking or gulping of drinks.

5. Tendency toward making alibis and weak excuses for drinking.

6. Refusal to concede what is obviously excessive consumption and expressing annoyance when the subject is mentioned.

7. Frequent absenteeism from the job, especially following weekends and holidays.

8. Repeated changes in jobs, particularly if to successively lower levels, or employment in a capacity beneath ability, education and background.

9. Shabby appearance, poor hygiene, and behavior and social adjustment inconsistent with previous levels or expectations.

10. Persistent vague physical complaints without apparent cause, particularly insomnia, stomach upsets, headaches, loss of appetite.

11. Multiple contacts with the health care system with disorders that are alcohol caused or related.

12. Persistent marital and family problems, perhaps with multiple marriages.

13. History of arrests for drunkenness or drunken driving.

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EDITORIAL

WITH little respect to inflation's holiday, medical school education costs have accelerated. To the legions of perspective students and their sponsors the spectre of expensive medical education compounds their recent wrestling with college costs. Not only are the challenges of course work becoming more intense, but also the effort to maintain one's fiscal integrity is ever tested. Estimates for non-state supported schools have been leaked to the press, and might be expected to reflect rising costs, salaries, etc. Endowments which hitherto guaranteed a sedate budget proportioning now are being assaulted and potentially diminished. What is even more disturbing is the concomitant increase in state affiliated institution costs which before were to be entered for less of a stake. Legislatures have less largess to share and eroding patience for the institutions which promise their nutured subjects to the state for the public good. No assurance is promised to the state that its sponsorship will result in physician care in all its realm. Admission officers are perusing the applications for candidates who will salve the state's demand for repayment in personnel. Private institutions, divorced from such requirements, nevertheless, have some governmental help in past years which was designed to increase the number and hopefully the dispersion of physicians in the United States. Now the budget gatekeepers are closing the access to their funding.

Students seemed destined to be either the benefactors of parental means or be the mortgagor to the bank. Debts are now considered to be outstanding at their birth and no compensation is made for financial immaturity.

Inevitably the schooling will be disproportionately represented by those of higher monetary class with the smaller fraction being those who are on borrowed resources. Whether the decreased applications for first year medical school is from cost concern or recognition of subsequent less than ideal working conditions is moot. What matters is that we must construct a more equitable and ecumenical way to fund our schools, both private and state, lest we become more elite than healthy.

Stephen Z. Smith, M.D.

SPECIAL ARTICLE



Training Computer Personnel

The decision has been made for your practice to shift from manual operations to automatic through the use of a computer system. By the time you have made your decision, you have conducted an analysis of your practice, sent out and received proposals from vendors, made a selection, and have signed a contract for purchase or lease of a system. Plans should now be underway to install your new system and gear your staff for implementation of this effort.

Although many computer users wait until they receive their system before beginning training, it is recommended that initial staff training begin during the pre-installation phase. Depending on the system you purchase, there may be a 60-90-day waiting period. This time could be used to acquaint your staff with the basics of computers, read the documentation, and attend classes (if available). A basic knowledge of computers is important for any operator of your system. Understanding the terminology and some of the basic principles that govern computer operations will be extremely helpful. It is important to remember that the average employee in your practice has had little or no experience with computers. In five to 10 years this will change, but in the interim, it is important to provide the operator with the resources to become familiar with this new field called "Computers."

The most simplistic approach is to obtain publications on the basics of computers. This approach may not be the best, because it requires self-instruction and understanding without someone to explain clarification or more detailed information. Therefore, if the local university or local adult education system offers courses concerning the basics of computers, it may be a wise investment to send at least your main operator/manager to attend. For areas that are not within reach of a local program, you may wish to send your staff to a seminar on computers. More of these programs are being offered now, and you may be able to schedule your staff's participation at a site close to your practice. This type of program is also good for aiding the physician in understanding the basics of computers, even though he or she will not directly be using the system on a daily basis.

Once you have the basics understood, you will need to study the specific applications of your system. First, review the basic operations of the hardware. How do

you turn it on? What do you need to do to load the software? It may be necessary to wait for the arrival of the system to review this aspect of the training. Second, review the procedures for utilizing the operating software. This is the master program which controls all hardware and support software. A basic understanding of its function and how to utilize the programs that maintain the system are ideal before studying the individual support programs. There are three ways to study this information: 1) self-education by studying the manufacturer's documentation on the hardware and operating software; 2) using the documentation with the vendor providing additional instruction, and, 3) by using the manufacturer's training centers. The latter is expensive and should only be pursued if you have a large group or clinic practice. Another alternative is to check the local area for similar operations (medical offices with the same system) and see if an arrangement can be worked out for the main operator to assist with your training, or at least answer your questions: Third, undertake training in the individual support software. *(e.g.* word processing, accounting, etc.) To try and understand more than one program or application at a time will cause confusion and frustration. Select the program that will be used with the data you are installing first on your system. If you are utilizing self-training, make sure that your staff has a scheduled time each day of not less than one hour to train on the system. During this time, the employees should be free of other duties so they can concentrate. Some programs contain self-paced computer prompted training modules. These modules provide step by step use of the program and examples of problems and how they will be output. Make certain that the training modules for each support program containing these are installed on your system. Although they will take up room in your on-line storage, they will be very helpful during your initial implementation. After your staff has finalized their training, the module can be moved to off-line storage and be retrieved when needed in the future. Remember, unless you allow your staff uninterrupted time to examine the instructions and work with the computer, they may become disillusioned and apathetic towards efforts to automate your office.

Most vendors will provide one or two days of on-site training upon installation of your system. This instruction will help, but may not always provide all of the information needed. Check with the vendor to see what it will cost to retain additional instruction time for your staff for use at a later date. Your staff will benefit from advance training, especially after they have had an opportunity to use the system for awhile. The additional training will assist in refining their skills and enhancing their utilization of the system.

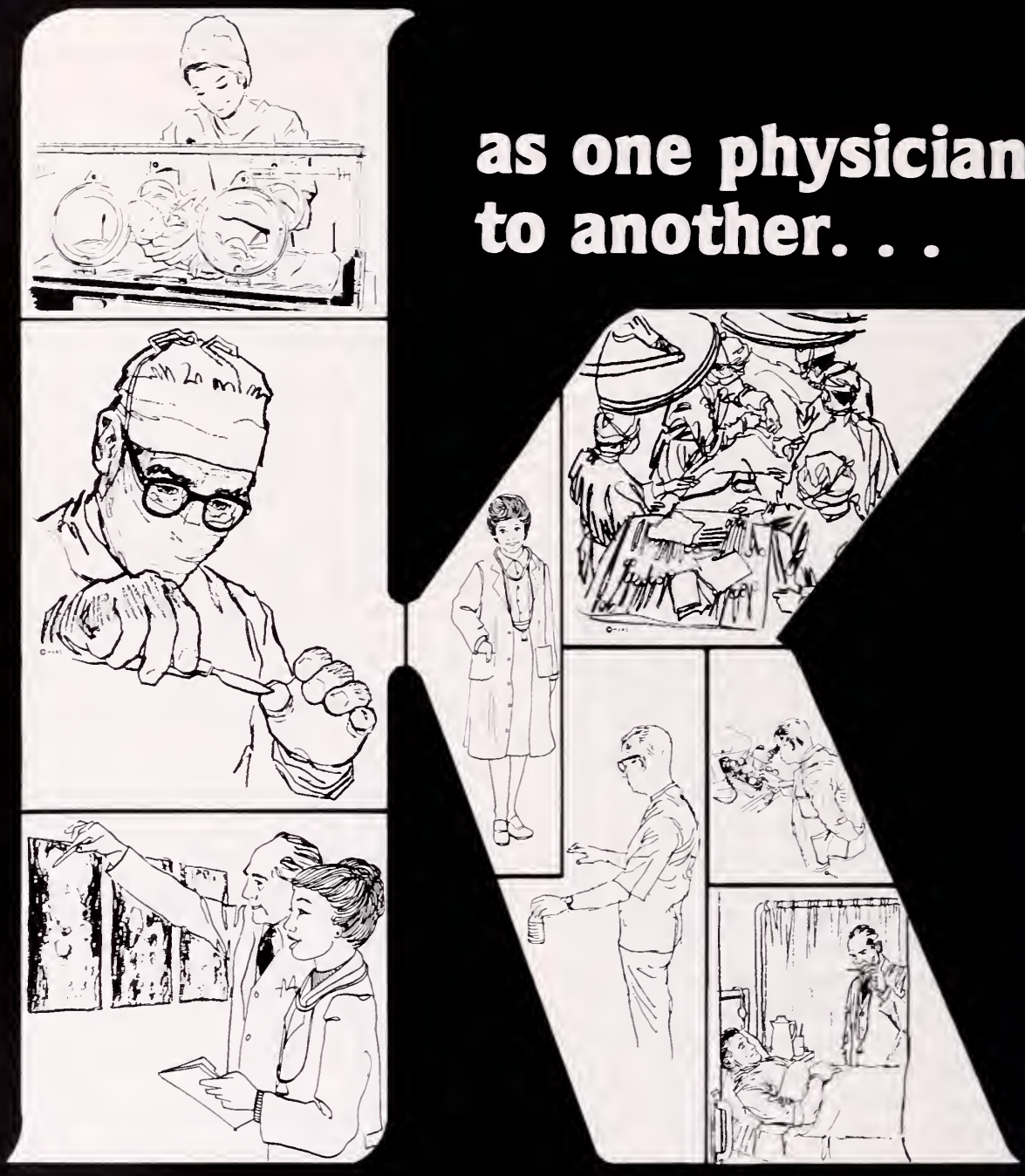
It is important to designate one individual from your staff as the primary operator. This individual will have the responsibility to understand the system's operation, its resources and the operation of all support programs.

In a typical physician's office, one individual could handle these responsibilities, besides carrying out other duties as the physician requires. A "resident expert" is an ideal aid in keeping your practice operating as smooth as possible. Invest in your employee's computer education and it will repay you in increased efficiency and high morale.

We have already mentioned some of the sources to utilize in training your staff, but another source not to be overlooked, is the local users group for the type of equipment you use. Computer users groups provide numerous educational opportunities besides key contacts to use when confronted with a utilization problem. In your request for proposals, have the vendor include information on the users groups in your area. These users are in the same situation as you, although they may not be using the exact same model system, there is enough similarity in the product line that they could be of assistance. Also, their advice is usually free, and similarly, they may have experienced the same problem you currently are facing. These individuals can also give you good references on other types of equipment and programs that you may want to add in the future.

Major computer manufacturers will provide you with similar ongoing support for an annual fee, however, every resource at your disposal should be explored. These individuals have a wealth of information that is not available anywhere else. Members of your staff should become involved in these groups. Also, consider other national or local computer groups, as their main purpose is for education. Although they do not provide specific instruction on a particular company's product, they do provide generic workshops, whose applications could be incorporated in your practice or future office automation. When investing in a computer, make sure this is an area where you do not skimp. The small investment for training will pay off.

This is the sixth in a series of articles by Joe Witherington, Jr., System Manager for KMA and KMIC.



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Book Reviews

Harper's Review of Biochemistry—19th Edition

D. W. Martin, Jr., P. A. Mayes, Ph.D., DSc., Victor W. Rodwell, Ph.D.

This is the grandfather of the Lange family, and as such fits comfortably and deservedly at the head of the group. Much like a beginning education this subject matter is deemed basic science and awarded immortality in the nascent years of medical education. Actually this book should be named for its fraternal parts, biochemistry and molecular biology. Some of us will look at this material presented and wonder how all the flow of information we consumed has evaporated by the heat of progress. Particularly molecular biology has become not only integrated in our basic science education, but in some areas of academe this information supercedes the classic biochemistry of electrolytes, carbohydrates, protein, lipid and hormone metabolism. Nevertheless, Dr. Martin *et al* undertake a thorough review of biochemistry. The figures, drawings, and diagrams are frequent, inserted appropriately, inhibit the ennui of reading and are likely to be recalled. Certainly not all that is known is discussed, but enough is there to legitimize the advertisement as a complete review.

The schism that potentially threatens this book never develops because the obvious molecular biology prejudice is forgiven by including much classic biochemistry. Burgeoning genetic research has spawned in its womb most of the second half of this book. Within several hundred pages the reader can update and as likely be introduced to molecular genetics. Darwin takes a stone age place in the history of this development. Every field of medicine seems to be obliged to this material, to explain its questions and initiate its research.

An extensive index, a handy dictionary and other perks make for a long shelf life.

Mechanism on Pain and Acupuncture

Koyo Takase, M.D.
The 21st Century Co., Tokyo

Can a Japanese acupuncture book find happiness in the Bluegrass? Among us are practitioners of acupuncture from both the Old and New World, and the results of their experience has found its way into our most esteemed journals. This book is the culmination of Dr. Takase's work on the physiological basis for acupuncture and his introduction of sodium hydroxide by injection as the acupuncture media. With significant detail, graphs, and calculations, the sodium hydroxide saga is told. Proposing sodium hydroxide injection into the skin for itching, tonsilitis, lymphadenitis, alopecia areata, toothache, and functional disease, Dr. Takase demonstrates what is obviously his confidence in a nominated panacea. "Future Studies" are proposed for diabetes, coma, epilepsy, headache, anaphylaxis, heart disease and asthma, etc.

For those of us who are of more conventional medical persuasion this book will not replace any of our medical library. The book is of mixed blood, with half written in English, and half mirrored in an equivalent—apparently—half in Japanese.

I doubt that this book will be subject to import quotas but it does let us observe that interesting blend of cultures that is modern Japan.

Stephen Z. Smith, M.D.
Assistant Scientific Editor

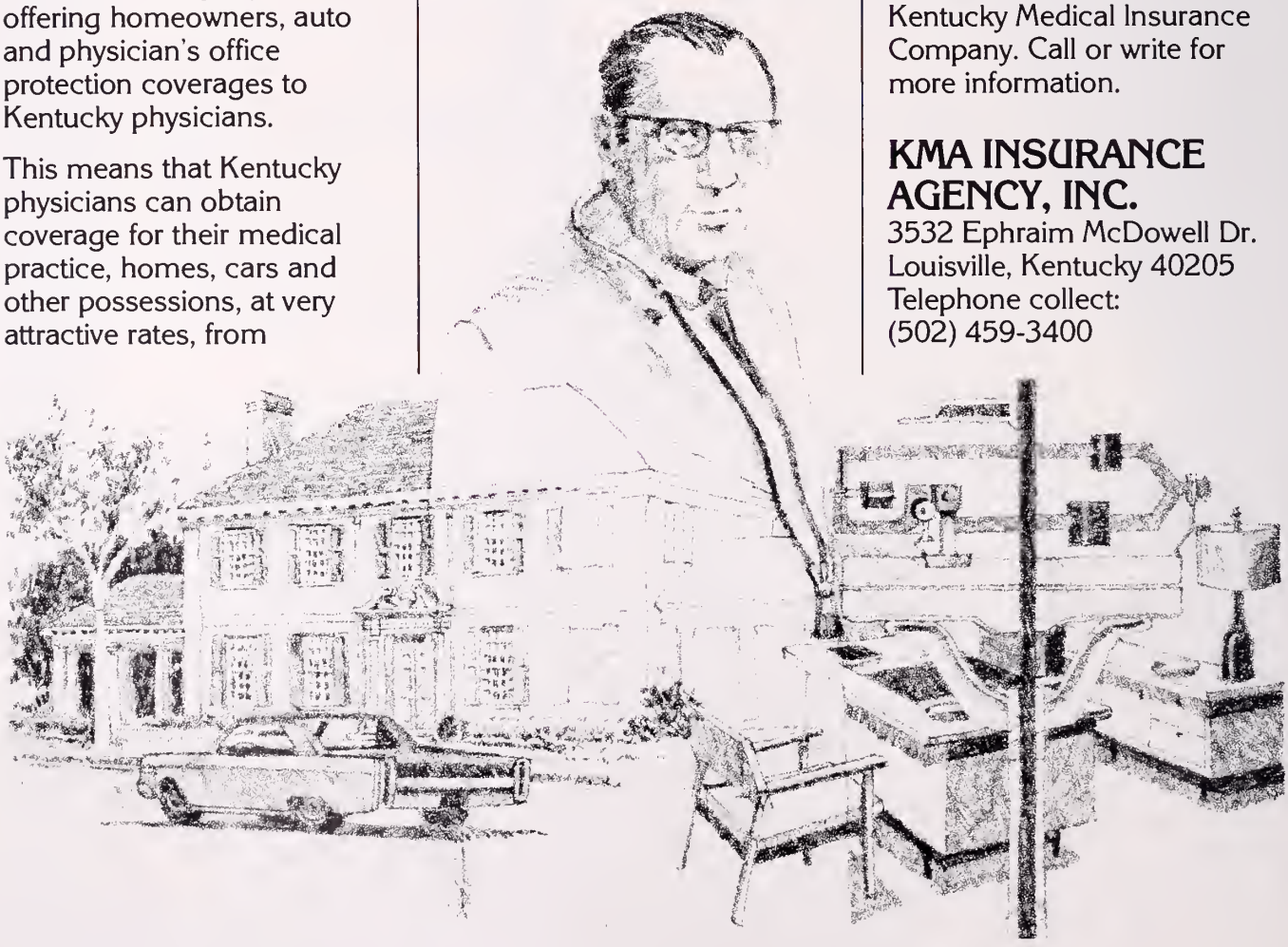
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Wally O. Montgomery, M.D., Nominated for President-Elect

Wally O. Montgomery, M.D., a practicing general surgeon from Paducah has been nominated for KMA President-Elect by the McCracken County Medical Society.

Doctor Montgomery graduated from Georgetown College, Summa Cum Laude in 1958 and attended the University of Louisville School of Medicine, graduating in 1962. He interned at Baptist Memorial Hospital, Memphis, Tennessee from 1962-63 and received surgical residency training in University of Louisville hospitals from 1963 to 1967. Doctor Montgomery has had a long military career which he has maintained through the Reserves, and currently serves as a Lieutenant Colonel commanding a Reserve surgical hospital.

Doctor Montgomery is a Fellow of the American College of Surgeons and a Diplomat of the American Board of Surgery. Organizational memberships include the McCracken County Medical Society; KMA, where he currently serves as First District Trustee; KEMPAC, where he has served as Chairman of the Board; Alternate Delegate from Kentucky to the American Medical Association; the Kentucky Surgical Society; and the Southeastern Surgical Society. Doctor Montgomery is a member of the staff of Western Baptist Hospital where he has served as President of the medical staff, and Lourdes Hospital in Paducah.

In civic matters, Doctor Montgomery is a Deacon and committee Chairman of the Immanuel Baptist Church in Paducah; is a member of the Urban Renewal and Community Development Board in Paducah; is a member of the Red Cross Board of Directors and is on the Board of Trustees of Georgetown College, as well as a member of the Optimist Club.

Doctor Montgomery and his wife Gerry have two daughters and one son.



Wally O. Montgomery, M.D.

On behalf of the Kentucky Medical Association, the Board of Trustees wishes to express special thanks to the Kentucky Surgical Society for its donation of $2,000 to the Ephraim McDowell House.

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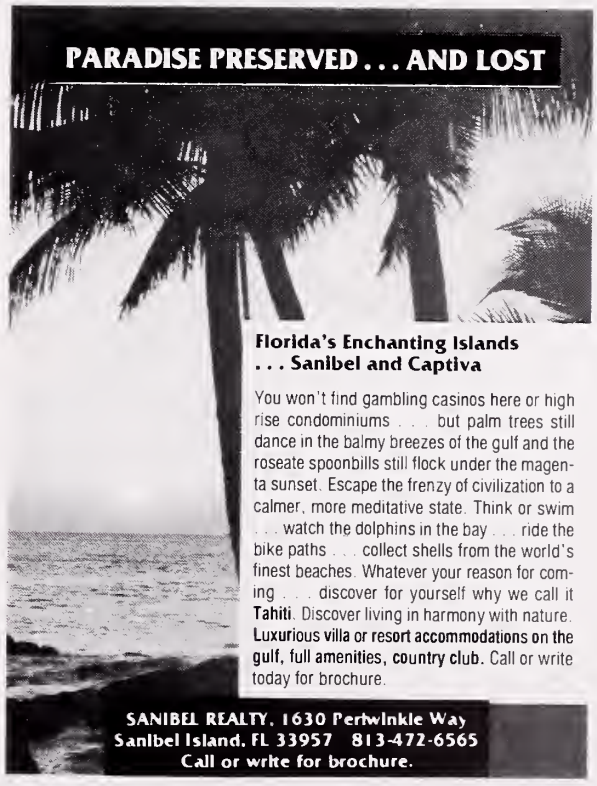
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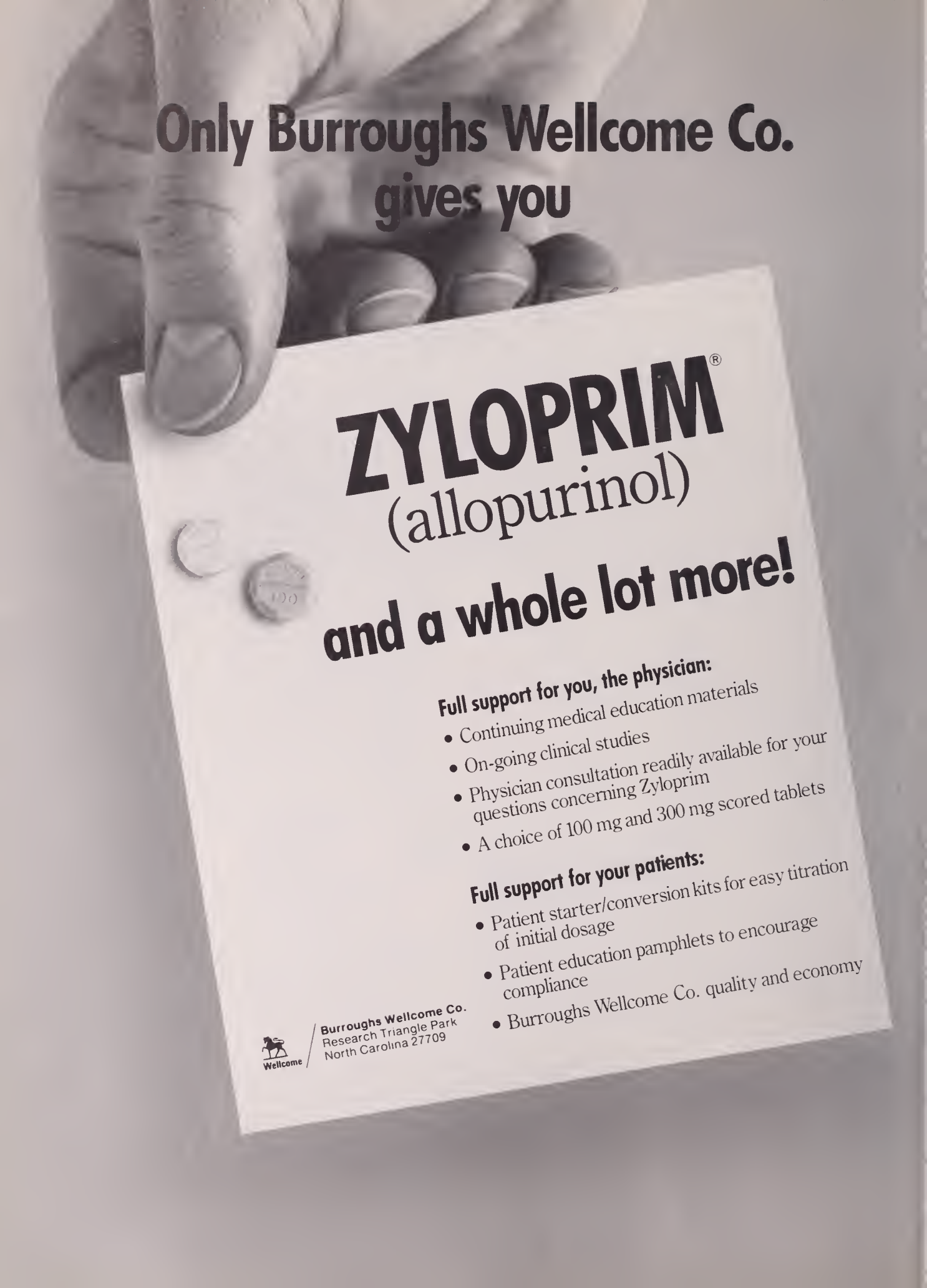
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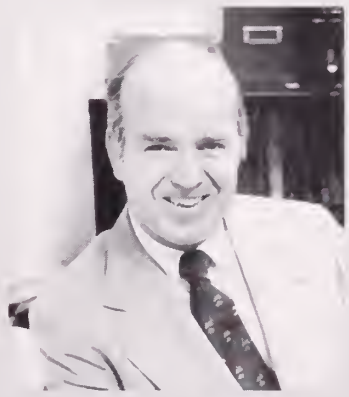
Dwight L. Blackburn, M.D.
KMA President



James B. Holloway, Jr., M.D.



Charles C. Smith, Jr., M.D.



S. Randolph Scheen, M.D.



Peter C. Campbell, Jr., M.D.



Thomas L. Heavern, M.D.

PRESIDENT-ELECT
James B. Holloway, Jr., M.D.
Lexington

James B. Holloway, Jr., M.D., will be installed as President-Elect of the Kentucky Medical Association at the President's Luncheon on Wednesday, September 21.

Doctor Holloway is a 1945 graduate of the Yale University School of Medicine. He is a past president of the Fayette County Medical Society and the Lexington Surgical Society. Doctor Holloway served as Chairman of the KMA Board of Trustees and was elected Vice-President of the Association in 1972-73.

He is currently a member of the Kentucky Medical Insurance Company Board of Directors and Vice Chairman of the Kentucky Medical Insurance Company.

Doctor Holloway, a general surgeon, is currently Chief of Staff at Humana Hospital in Lexington.

VICE-PRESIDENT
Charles C. Smith, Jr., M.D.
Louisville

Charles C. Smith, Jr., M.D., an internist, is a native of Bell County, Kentucky. He is a former President of the Jefferson County Medical Society and former President of the Louisville Society of Internists. He served on the Board of Trustees of the Methodist Evangelical Hospital from 1973 to 1977, and is a former Scientific Editor of the *Journal of the Kentucky Medical Association.*

Doctor Smith is a 1955 graduate of the University of Louisville School of Medicine.

SPEAKER OF THE HOUSE
Peter C. Campbell, Jr., M.D.
Louisville

Doctor Campbell, ophthalmologist, is Clinical Professor of Ophthalmology at the University of Louisville School of Medicine. He is this year's President of the Jefferson County Medical Society. Doctor Campbell is a member of American Academy of Ophthalmology and Otolaryngology, the Kentucky Academy of Eye Physicians and Surgeons, and is President of the medical staff at Methodist Evangelical Hospital.

VICE SPEAKER OF THE HOUSE
Thomas L. Heavern, M.D.
Highland Heights

Thomas L. Heavern, M.D., is a pediatrician with the Northern Kentucky Pediatric Group, PSC. Doctor Heavern served as KMA Parliamentarian from 1981 to 1983 and has been an AMA Delegate since 1965. He has also served on the KMA Rules Committee of the House of Delegates, Constitution and Bylaws Committee and as regional Editor for the *Journal of the Kentucky Medical Association.*

SECRETARY-TREASURER
S. Randolph Scheen, M.D.
Louisville

Doctor Scheen was KMA Secretary for eight years before his election as Secretary-Treasurer in 1975. A dermatologist, he is a graduate of the University of Louisville and University of Minnesota medical schools. Doctor Scheen serves the Association as a member of the Budget Committee and Judicial Council. He is a member of the American Academy of Dermatology and the Alumni Foundation of the Mayo Clinic, and is a regular participant on local television and radio programs, answering questions from the public on dermatology.

AMA DELEGATES

David B. Stevens, M.D., Lexington

Doctor Stevens is the Senior Delegate to the AMA from Kentucky, having served since 1965 as Delegate or Alternate Delegate. An orthopedic surgeon, Doctor Stevens is a Past President of the Fayette County Medical Society, and served eight years on the KMA Committee on Legislative Activities. A 1955 graduate of Northwestern University, Doctor Stevens is Assistant Clinical Professor of Surgery at the University of Kentucky.



Fred C. Rainey, M.D., Elizabethtown

Doctor Rainey was elected as AMA Delegate in 1974, having previously served as President of KMA, Alternate AMA Delegate, and Board Chairman of KEMPAC. A 1955 graduate of the University of Tennessee College of Medicine, Doctor Rainey is a family physician. He is a member of the AMA Council on Legislation, the American Medical Political Action Committee, the Kentucky Academy of Family Physicians, and the American Academy of Family Physicians.



Harold D. Haller, Sr., M.D., Louisville

Elected an AMA Delegate in 1976, Doctor Haller has been active on the Committee on Maternal and Child Health and the Committee on Health Care Costs. Doctor Haller graduated in 1963 from Bowman Gray Medical School, and has been in family practice since then. A charter member of the American Board of Family Practice, Doctor Haller also has served as President of the Kentucky Chapter of the American Academy of Family Physicians.



NEW TRUSTEES

Ronald D. Hall, M.D.
Pikeville

Doctor Hall is serving as Trustee from the 14th District. In addition to his private practice of dermatology, Doctor Hall is on staff at Pikeville Methodist Hospital and was President of the Pike County Medical Society in 1981. He is a 1974 graduate of the University of Kentucky School of Medicine.

R. Kendall Brown, M.D.
Georgetown

Albert H. Joslin, M.D.
Owensboro

Garner E. Robinson, M.D.
Ashland

JOURNAL EDITORS

EDITOR

A. Evan Overstreet, M.D., Louisville

Doctor Overstreet had served on the Editorial Board for more than six years before becoming Editor of *The Journal* in September 1977. An internist, Doctor Overstreet is a 1955 graduate of the University of Louisville School of Medicine. He is a member of the American Society of Internal Medicine, the American College of Physicians, and the Transylvania Medical Society.

Paul C. Grider, Jr., M.D., Louisville

Doctor Grider has served as Scientific Editor of *The Journal* since 1975. An internist, Doctor Grider was President of the Louisville Society of Internists from 1976 to 1977 and also former President of the medical staff at Methodist Evangelical Hospital. Doctor Grider is a 1958 graduate of the University of Louisville School of Medicine.

Milton F. Miller, M.D., Louisville

Doctor Miller is Associate Clinical Professor of Medicine at the University of Louisville School of Medicine. An internist, Doctor Miller has served as Assistant Editor of *The Journal* since 1976, and has been on the Membership Committee of the Jefferson County Medical Society. He is a 1954 graduate of the University of Louisville.

G. Randolph Schrodt, M.D., Louisville

Doctor Schrodt has served as Assistant Editor since 1974. A 1954 graduate of the University of Louisville School of Medicine, Doctor Schrodt is a pathologist, and is Professor and Chairman of the Department of Pathology at the University of Louisville School of Medicine. He is a member of the American Society of Clinical Pathologists and the International Academy of Pathology.

Stephen Z. Smith, M.D., Louisville

Doctor Smith has served as Assistant Scientific Editor for *The Journal* since 1977. A dermatologist, Doctor Smith is a 1971 graduate of Johns Hopkins University School of Medicine. He is a member of the American Academy of Dermatology, the Kentucky Medical Association and the American Medical Association.

David L. Stewart, M.D., Louisville

Doctor Stewart, a former Editor of the Jefferson County Medical Society Bulletin, is in his sixth year as Assistant Editor of *The Journal.* A psychiatrist, Doctor Stewart graduated from the University of Louisville in 1946, is a member of the American Psychiatric Association, and is Chairman of the KMA Committee on Physician's Health.

McHenry S. Brewer, M.D., Louisville

Doctor Brewer is serving his first year as Assistant Editor for the *Journal of the Kentucky Medical Association.* A surgeon, Doctor Brewer attended the University of Louisville School of Medicine and was President of the Jefferson County Medical Society in 1972-73. He is a fellow of the American College of Surgeons and a member of the Southern Surgical Association.

Official Call
KMA Annual Meeting

To the officers and members of the component county medical societies of the Kentucky Medical Association.

Meeting Place

The Annual Meeting of KMA will convene on Tuesday, Wednesday, and Thursday, September 20, 21, 22, at the Ramada Inn/Bluegrass Convention Center, Louisville. The first general session will be called to order at 8:50 a.m., Tuesday.

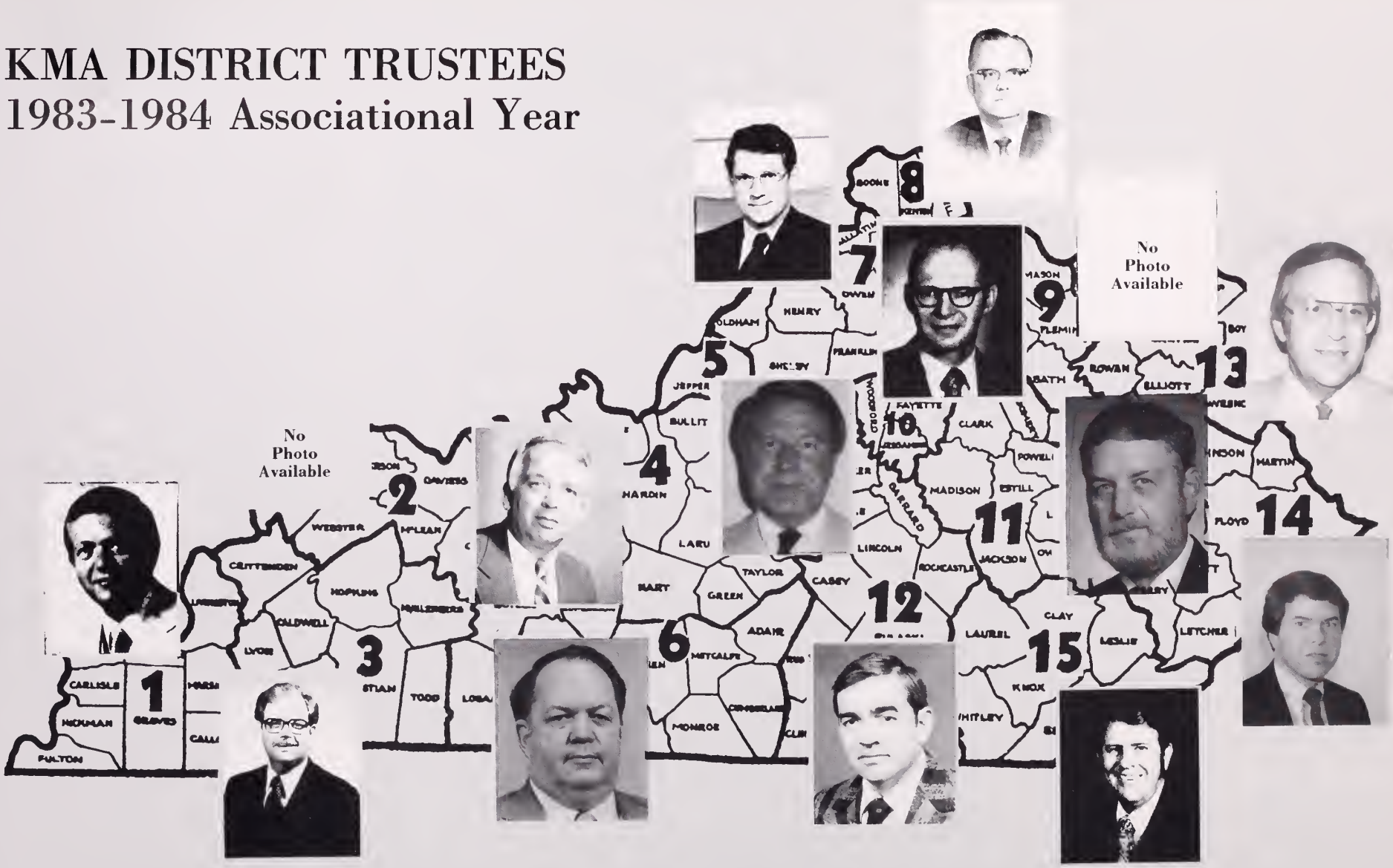
The House of Delegates

The first regular session of the House of Delegates will convene at 9 a.m., Monday, September 19, in the Julia Belle Room, Convention Center. The second regular business session will begin at 6 p.m., Wednesday, September 21, in the Julia Belle Room, Convention Center.

Registration

The registration desk will open for Delegates in the lobby of the Bluegrass Convention Center, at 8 a.m. Monday, September 19 and at 5 p.m. Wednesday, September 21. General registration will be held in the lobby of the Bluegrass Convention Center from 8 a.m. to 5 p.m., Tuesday and Wednesday, and 8 a.m. to 3:30 p.m. on Thursday.

KMA DISTRICT TRUSTEES
1983-1984 Associational Year



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Paducah

2. ALBERT H. JOSLIN
Owensboro

3. HENRY R. BELL
Elkton

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Lawrenceburg

8. ROBERT E. SMITH*
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10. RICHARD F. HENCH†
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12. DANNY M. CLARK
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13. GARNER E. ROBINSON
Ashland

14. RONALD D. HALL
Pikeville

15. DONALD C. BARTON*
Corbin

Member, KMA Executive Committee
†Chairman, KMA Board of Trustees

KMA DELEGATES

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ALLEN
Earl P. Oliver, M.D., Scottsville

ANDERSON

BALLARD

BARREN
Howard Edgin, M.D., Glasgow
Daryl P. Harvey, M.D., Glasgow

BATH

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Kenneth W. Smith, M.D., Middlesboro

BOONE
Herbert B. Francis, M.D., Florence
Donald J. Swikert, M.D., Florence

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William H. Cox, M.D., Paris

BOYD
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H. B. McWhorter, M.D., Ashland
Lamar C. Meigs, M.D., Ashland
Charles T. Watson, M.D., Ashland

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David C. Liebschutz, M.D., Danville
Scott B. Scutchfield, M.D., Danville

BRACKEN
Milton L. Brindley, M.D., Augusta

BREATHITT
E. C. Turner, M.D., Jackson

BRECKINRIDGE

BULLITT
J. R. Cundiff, Jr., M.D., Shepherdsville

BUTLER

CALLOWAY
Charles D. Clark, M.D., Murray
R. Gary Marquardt, M.D., Murray

CAMPBELL-KENTON
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Richard A. Allnutt, M.D., Edgewood
Carl J. Brueggemann, M.D., Covington
Todd M. Cook, M.D., Cold Spring
Thomas L. Heavern, M.D., Highland Hts.
Howard A. Heringer, M.D., Ft. Mitchell
William B. Monnig, M.D., Erlanger
Fred A. Stine, M.D., Highland Heights
Raymond J. Timmerman, M.D., Ft. Thomas

CARLISLE

CARROLL
Cecil D. Martin, M.D., Carrollton

CARTER

CASEY
Lewis E. Wesley, M.D., Liberty

CLARK
Harold S. Moberly, M.D., Winchester

CLAY
William E. Becknell, Sr., M.D., Manchester

CLINTON
Floyd B. Hay, M.D., Albany

CRITTENDEN
Gary V. James, M.D., Marion

CUMBERLAND
Samuel L. Rice, M.D., Burkesville

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Charles Omar Wilson, Jr., M.D., Owensboro

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Walter L. O'Nan, M.D., Henderson

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Roy J. Meckler, M.D., Louisville
James P. Moss, M.D., Louisville
John D. O'Brien, M.D., Louisville
C. Kenneth Peters, M.D., Louisville
Henry W. Post, M.D., Louisville
C. Ray Potts, M.D., Louisville
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Alex Poulos, M.D., Pikeville

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Olson Parrott, II, M.D., Versailles

Reference Committee Activity

Speaker Peter C. Campbell, Jr., M.D., Louisville, will assign all officers' and committees' reports and resolutions to one of six Reference Committees at the first meeting of the KMA House of Delegtates at 9:00 a.m., Monday, September 19. A brief session for Reference Committee Chairmen will be held at 12:30 p.m., Monday, in the Delta Queen Room of the Bluegrass Convention Center. Any KMA member wishing to testify on any resolution or report is urged to be present for the Reference Committee meetings which will be held at 2:00 p.m., Monday, September 19, in the Convention Center. These open sessions will last one hour, in order for all who wish to speak to be heard. Following the open hearings, the Committees will go into executive sessions to study the reports, review the testimony, and write their reports to the House.

The Committees' recommendations will be presented at the final meeting of the House, Wednesday evening, September 21, in the Julia Belle Room of the Convention Center.

As Speaker of the House of Delegates, Doctor Campbell is in the process of finalizing appointments to the six Reference Committees, Credentials Committee, and Tellers Committee.

If your society has not yet submitted the name of your Delegate(s) to the Headquarters Office, you should do so immediately, as only those names recorded in the office can be considered for appointment to one of these important committees.

A complete listing of members who will be serving on the six Reference Committees and the location of the Reference Committee meetings will be published in the September issue of the *KMA Journal.*

Anyone desiring names of Reference Committee members before the September issue is published should contact the Headquarters Office.

Election of Trustees and Alternate Trustees

The House of Delegates will elect five District Trustees and five Alternate Trustees at its second regular meeting, Wednesday, September 21. Nominations will be made by the Delegates from the electing Districts at a meeting following the first meeting of the House on Monday, September 19.

The Nominating Committee will report at the close of the first scientific session on Tuesday, September 20. Further nominations may be made from the floor at the final meeting of the House on Wednesday evening, September 21. All nominations are considered and acted upon by the Delegates at this final meeting.

Districts electing Trustees for three-year terms are: **FIRST DISTRICT** (incumbent, Wally O. Montgomery, M.D., Paducah); **THIRD DISTRICT** (incumbent, Henry R. "Hank" Bell, M.D., Elkton); **FOURTH DISTRICT** (incumbent, Thomas R. Taylor, M.D., Elizabethtown); **TWELFTH DISTRICT** (incumbent, Danny M. Clark, M.D., Somerset); **FOURTEENTH DISTRICT** (incumbent, Ronald D. Hall, M.D., Pikeville).

Districts electing Alternate Trustees are the same as those electing Trustees. Incumbents are: John D. Noonan, M.D., Paducah (1st); Sam H. Traughber, M.D., Hopkinsville (3rd); John W. Ratliff, M.D., Lebanon (4th); David C. Liebschutz, M.D., Danville (12th); with a vacancy in the 14th District.

Trustees in the 3rd, 4th, 12th, and 14th Districts are eligible for re-election, while the Trustee in the 1st District has served two full terms and is not eligible for re-election. All of the Alternate Trustees are eligible for re-election.

Nominating Committee to Meet Monday, September 19

The KMA Nominating Committee will hold an open meeting at the close of the first meeting of the House of Delegates, Monday, September 19, in the Julia Belle Room of the Bluegrass Convention Center. Any KMA member may confer with the Committee during this meeting.

The report of the Nominating Committee will be posted in the general assembly hall at the conclusion of the first general session, Tuesday morning, September 20.

Nominations may be made from the floor during the second meeting of the House of Delegates, Wednesday evening, September 21. The House will vote on the nominees at the close of this session.

Members of the Committee are: Cecil D. Martin, M.D., Carrollton, Chairman; John W. McClellan, Jr., M.D., Henderson; Richard S. Miles, M.D., Russell Springs; John D. Noonan, M.D., Paducah; and Preston P. Nunnelley, Jr., M.D., Lexington.

Nominations should be sent before the Annual Meeting to the KMA Headquarters Office, Attention, Nominating Committee.

House to Elect New Officers During Annual Meeting

KMA officers for the 1983-84 Associational year will be elected by the House of Delegates at the close of its final meeting, Wednesday evening, September 21. Officers to be elected from the state at large are:

Office	Term
President-Elect	One Year
Vice President	One Year
Speaker, House of Delegates	Three Years
*Peter C. Campbell, Jr., M.D.	
Vice Speaker, House of Delegates	Three Years
*Thomas L. Heavern, Jr., M.D.	
Delegates to the AMA	
*David B. Stevens, M.D.	
*Fred C. Rainey, M.D.	
*Lee C. Hess, M.D.	
Alternate Delegates to the AMA	
*Wally O. Montgomery, M.D.	
*Donald C. Barton, M.D.	
*Frank R. Pitzer, M.D.	

*Incumbent

The Board will be recommending to the House of Delegates that two AMA Delegates and Alternates be elected for a full two-year term; and one AMA Delegate and Alternate be elected for a one-year term to continue the present system of staggering AMA Delegate and Alternate Delegate elections.



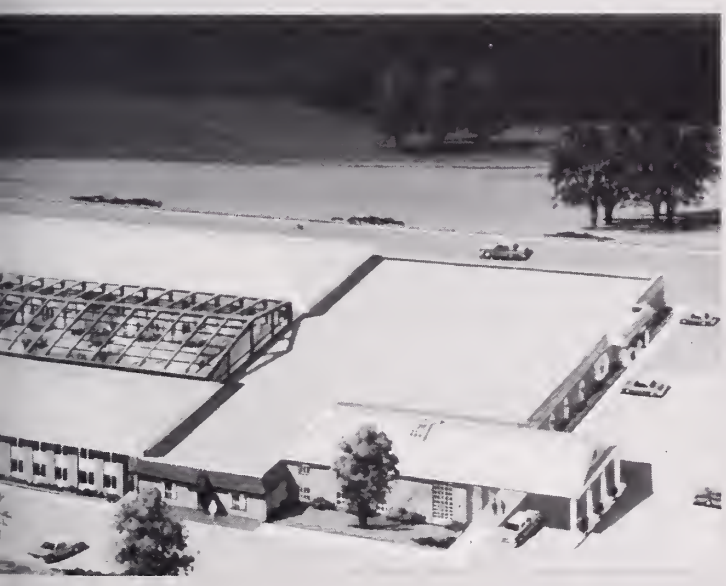
Ramada Inn/Bluegrass Convention Center

Annual Meeting Special Features

SCIENTIFIC SESSIONS are scheduled for September 20, 21, and 22 at the Ramada Inn/Bluegrass Convention Center, Louisville. The theme for the 1983 scientific session is "Human Sexuality." Both the presentations and discussion periods will contribute to the continuing medical education of Kentucky's physicians.

TWENTY-ONE SPECIALTY GROUPS will hold meetings on the afternoon of September 20 and 22. Beginning at 1:30 p.m., the meetings will be held in Ramada Inn/Bluegrass Convention Center with the exception of the Kentucky Dermatological Society, which will meet at Norton-Children's Hospital, Louisville. Individual programs of the specialty societies are listed in this issue. No general sessions are scheduled during the specialty group meetings and all KMA members are invited to attend any specialty meetings.

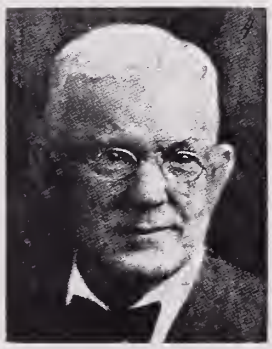
SCIENTIFIC AND TECHNICAL EXHIBITS will display new medical products, services and techniques at the Bluegrass Convention Center during the 1983 Annual Meeting. Members and guests are urged to take the opportunity to view products of interest at the 30-minute intermissions scheduled during each general and specialty session.



THE KMA HOUSE OF DELEGATES will meet twice during the Annual Meeting. The first session of the House will be held at 9 a.m., Monday, September 19, in the Julia Belle room of the Ramada Inn/Bluegrass Convention Center. The final session will be held Wednesday, September 21, at 6 p.m., in the Julia Belle room also. Officers for the 1983-84 Associational year will be elected at the second session.

THE PRESIDENT'S LUNCHEON will feature Edward R. Annis, M.D., past president of the AMA, on Wednesday, September 21, in the Julia Belle room of the Bluegrass Convention Center. The Luncheon also will include the presentation of KMA awards and the installation of the 1983-84 KMA President, James B. Holloway, Jr., M.D.

1983 Annual Meeting To Honor Past President Richmond



The 1983 Annual Meeting of the Kentucky Medical Association will be officially titled, "The W. W. Richmond Meeting" in remembrance of the 1903 President of the Association.

The tradition of honoring a past president of KMA and other distinguished physicians originated at the 1935 Annual Meeting.

Eugene H. Conner, M.D., Louisville, KMA Historian, has written a biography on Doctor Richmond for the Annual Meeting program booklet to be distributed during the meeting in Louisville, September 19-22.

Announcing

Twenty-first KEMPAC Annual Seminar-Banquet

Featuring

Republican and Democratic Nominees for Governor of the Commonwealth of Kentucky

Lt. Governor Martha Layne Collins **Senator James P. Bunning**

Monday, September 19, 1983

Ramada Inn—Bluegrass Convention Center

6:00 p.m. EDT—Reception

7:00—Dinner

Program to Follow

Tickets are available through a KEMPAC Director
or
KEMPAC Headquarters Office **Telephone—(502) 454-3505**

3532 Ephraim McDowell Drive
Louisville, Kentucky

YOU will want to attend! **Make Your reservations NOW!**

1983 Annual Meeting Program Summary

Kentucky Medical Association

September 18, 19, 20, 21, and 22.
Ramada Inn/Bluegrass Convention Center
Louisville

SUNDAY, SEPTEMBER 18

12:30 p.m.	KMA Board of Trustees Meeting and Dinner	Mississippi Queen Room, Convention Center

MONDAY, SEPTEMBER 19

9:00 a.m.	First Meeting, KMA House of Delegates	Julia Belle Room, Convention Center
12:30 p.m.	Luncheon, Reference Committee Chairmen	Delta Queen Room, Convention Center
2:00 p.m.	Reference Committee Meetings	Cincinnati Room, Island Queen-Idlewild Rooms, Majestic-New Orleans Rooms, Grand Republic Room, Mississippi Queen Room, Natchez Room, Convention Center
6:00 p.m.	KEMPAC Reception, Banquet and Seminar	Julia Belle Room, Convention Center

TUESDAY, SEPTEMBER 20

8:00 a.m.	Registration	Lobby, Convention Center
8:50 a.m.	Opening Ceremonies	Scientific Assembly Hall, Convention Center
9:00 a.m.	First Scientific Session	Scientific Assembly Hall, Convention Center
12:00 noon	Luncheon Meeting Executive Committee and Reference Committee Chairmen	Ramada Inn
1:30 p.m.	Specialty Group Sessions, Convention Center (Eleven Specialty Groups will meet simultaneously at this time. Their programs begin on page 656)	
5:30 p.m.	Reception Honoring James B. Holloway, Jr., M.D. and Mary Veurink	Poolside, Ramada Inn

WEDNESDAY, SEPTEMBER 21

8:40 a.m.	Second Scientific Session	Scientific Assembly Hall, Convention Center
11:50 a.m.	President's Luncheon	Julia Belle Room, Convention Center
2:30 p.m.	Third Scientific Session	Scientific Assembly Hall, Convention Center
3:00 p.m.	Board of Trustees Meeting and Dinner (5 p.m.)	Mississippi Queen Room, Convention Center
6:00 p.m.	Second Meeting, KMA House of Delegates	Julia Belle Room, Convention Center

THURSDAY, SEPTEMBER 22

9:00 a.m.	Fourth Scientific Session	Scientific Assembly Hall, Convention Center
12:00 noon	Luncheon Meeting, Board of Trustees	Kentucky Room, Ramada Inn
1:30 p.m.	Specialty Group Sessions, Convention Center (Ten Specialty Groups will meet simultaneously at this time. Their programs begin on page 660)	

A 30-minute intermission has been scheduled during each morning and afternoon Scientific Session for visiting Scientific and Technical Exhibits

The Kentucky Medical Association
SCIENTIFIC PROGRAM
W. W. Richmond Memorial Meeting
Ramada Inn/Bluegrass Convention Center

ALAN J. WABREK, M.D.
Hartford, Connecticut



Director, Medical Sexuality, Hartford Hospital, Hartford, Connecticut. Associate Professor, Obstetrics and Gynecology, University of Connecticut School of Medicine. M.D., 1963, Boston University School of Medicine. Member, American Association for Marriage and Family Therapy; Connecticut Society of American Board of Obstetrics and Gynecology; Eastern Association of Sex Therapy; Society of Behavioral Medicine; Fellow, American College of Obstetrics and Gynecology.

LEONARD I. MALIS, M.D.
New York, New York



Professor and Chairman, Neurosurgery, Mount Sinai School of Medicine, New York. Chief and Director, Neurosurgery, Mount Sinai Hospital, New York. M.D., 1943, University of Virginia, Charlottesville, Virginia. Member, American Physiological Society; AMA; American Association of Neurological Surgery; Congress of Neurological Surgeons; Society of Neuroscience; Fellow American College of Surgeons. Author of numerous publications.

TUESDAY, SEPTEMBER 20
MORNING GENERAL SESSION
General Sessions Hall

8:15 a.m.	Movie or Demonstration
8:50 a.m.	Opening Ceremonies
9:00 a.m.	"Newer Anesthetic Agents in Obstetrics" *Bradley E. Smith, M.D., Nashville, TN*
9:20 a.m.	"Evaluation and Treatment of Chronic Dysparunia"
9:40 a.m.	"Diagnosis and Management of Children with Ambiguous Genetalia."
10:00 a.m.	Intermission to Visit Exhibits
10:30 a.m.	"Vasculogenic Impotence *Ralph DePalma, M.D., Washington, D.C.*
10:50 a.m.	"Tumors in the Pituitary" *Leonard I. Malis, M.D., New York, NY*
11:10 a.m.	"Tumors of the Pituitary" *David A. Culp, M.D., Iowa City, IA*
11:30 a.m.	"Mechanisms of Lung Injury in ARDS: Clinical and Therapeutic Indications" *James E. Gadek, M.D., Columbus, OH*

AFTERNOON SESSION
SPECIALTY GROUP MEETINGS
Kentucky Society of Anesthesiologists
Natchez Room
Program to be Announced

Kentucky Chapter
American College of Chest Physicians
Julia Belle Foyer

1:30 p.m.	"Mechanisms of Lung Injury in ARDS: New Insights into Mechanisms and Therapy" *James E. Gadek, M.D., Columbus, OH*
2:15 p.m.	To be Announced
3:00 p.m.	Intermission to Visit Exhibits
3:30 p.m.	To be Announced
4:00 p.m.	To be Announced

Kentucky Neurosurgical Society
Delta Queen Room

1:30 p.m. "Nonacoustic Tumors of the Angle"
Leonard I. Malis, M.D., New York, N.Y.

2:00 p.m. "Subdural Hematoma Complicating V-P Shunts"
Terry M. Hagan, M.D., Louisville

2:15 p.m. "Effect of Calcium Channel Blockers in Cerebral Ischemia"
Frank P. Holladay, M.D., Lexington

2:30 p.m. "Removal of an Intramedullary Glioma from the Cervical Spinal Cord with Cusa and Intraoperative Monitoring of the Spinal Cord Conduction Velocity"
Lawrence F. Jelsma, M.D., Louisville

2:45 p.m. "Neuroimmuno Modulation"
William H. Brooks, M.D., Lexington

3:00 p.m. Intermission to Visit Exhibits

3:15 p.m. "Biologically Aggressive Pituitary Tumors with Extracranial Metastases or Widespread Subarachnoid Dissemination"
John W. Walsh, M.D., Ph.D., Lexington

3:30 p.m. "Motor Evoked Potentials in Spinal Cord Injury"
Phillip A. Tibbs, M.D., Lexington

3:45 p.m. "Post-Operative CT Scanning for Meningiomas: Value and Pitfalls"
John J. Guarnaschelli, M.D., F.A.C.S., Louisville

4:00 p.m. Business Meeting

KOGS—Kentucky Section ACOG
Julia Belle Room

1:30 p.m. "Pregnancy and Sexuality"
Charles Oberst, M.D., Louisville

2:00 p.m. "Dynamic History Taking in Sexual Counseling"
Alan J. Wabrek, M.D., Hartford, Conn.

2:30 p.m. Intermission to Visit Exhibits

3:00 p.m. "Dynamic History Taking in Sexual Counseling"
Alan J. Wabrek, M.D.

Kentucky Orthopaedic Society
Mississippi Queen Room
Program to be Announced

Kentucky Society of Pathologists
Cincinnati Room

1:30 p.m. "Diagnosis of Early Endocervical Glandular Neoplasia"
William L. Betsill, Jr., M.D., Charleston, SC

2:30 p.m. Intermission to Visit Exhibits

3:00 p.m. "Fine Needle Aspiration Cytology of the Breast"
William L. Betsill, Jr., M.D.

S. ASHBY GRANTHAM, M.D.
New York, New York



Chief of Orthopedic Trauma Services, Attending Orthopedic Surgeon, Presbyterian Hospital, New York. Chairman, New York Orthopedic Hospital Funds Committee. M.D., 1955, Washington University Medical School, St. Louis, Missouri. Member, New York Academy of Sciences; New York Academy of Medicine; AMA; American Society for Surgery of the Hand; American Academy of Orthopedic Surgery.

JOHN B. McCRAW, M.D.
Norfolk, Virginia



Plastic Surgeon, Plastic Surgery Specialists, Inc., Norfolk, Virginia. M.D., 1966, University of Missouri. Professor of Plastic Surgery, Eastern Virginia Medical School, Norfolk. Member, Society of Head and Neck Surgeons; American Society of Aesthetic Plastic Surgery; American Society of Plastic and Reconstructive Surgery; Society of Air Force Surgeons; Norfolk Academy of Medicine. Author of numerous publications.

HEUN Y. YUNE, M.D.
Indianapolis, Indiana



Professor of Radiology, Indiana University School of Medicine, Indianapolis, Indiana. M.D., Severance Medical College. Member, American Society of Head and Neck Radiology; Association of University Radiologists; American Roentgen Ray Society; Indiana State Medical Association; AMA; American College of Radiology. Author of numerous publications.

RICHARD R. BROOKMAN, M.D.
Richmond, Virginia



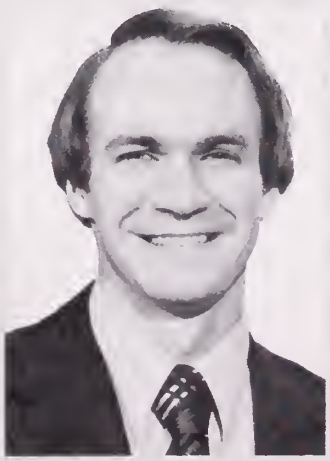
Director, Adolescent Health Services, Medical College of Virginia. Associate Professor of Pediatrics, Virginia Commonwealth University. M.D., 1969, Tufts University School of Medicine, Boston. Member, Virginia Pediatric Society; Society for Adolescent Medicine; Director of Publication, Editorial Board, *Journal of Development and Behavioral Pediatrics* and *Journal of Early Adolescence.*

ROBERT S. ELIOT
Omaha, Nebraska



Professor of Cardiology, Chairman Department of Stress Medicine, University of Nebraska Medical Center. M.D., 1955, University of Colorado School of Medicine, Denver. Member, AMA; Colorado State Medical Society; Central Society for Clinical Research; Biophysical Society; Society of Behavioral Medicine; Academy of Behavioral Medicine; American Society of Internal Medicine.

DAVID LEE GUYTON, M.D.
Baltimore, Maryland



Associate Professor of Ophthalmology, Wilmer Ophthalmologic Institute, John Hopkins School of Medicine. Co-director, Strabismus Services, Wilmer Ophthalmologic Institute. M.D., 1969, Harvard Medical School. Member, Chairman, Section on Refraction and Contact Lenses; American Academy of Ophthalmology; Associate for Research and Strabismus; Optical Society of American; Editorial Board, *Ophthalmology.*

Kentucky Chapter
American Academy of Pediatrics
Grand Republic Room
Program to be Announced

Kentucky Society for
Plastic and Reconstructive Surgery
Majestic—New Orleans Room

1:30 p.m. "History of Hand Surgery"
Sharon Romm, M.D., Lexington

1:50 p.m. "Another Free Flap Doner Site: The Lateral Upper Arm"
Robert D. Acland, M.D., Louisville

2:00 p.m. "Pre-Op Evaluation of Plastic Surgery Patients"
Morton L. Kasdan, M.D., Louisville
Ann Kasdan, R.N., Louisville

2:10 p.m. "Mohs' Microscopically Controlled Surgery for Periorbital Tumors"
Michael W. McCall, M.D., Louisville

2:20 p.m. "New Myocutaneous and Muscle Flap Refinements in Reconstruction of Complex Chest Wall & Thoracic Defects"
Gordon R. Tobin, II, M.D., Louisville

2:30 p.m. **Intermission to Visit Exhibits**

3:00 p.m. "Use of the Rectus Abdominus Flap in Cases Unsuited for the Latissumus Flap—A Preliminary Report"
John B. McCraw, M.D., Norfolk, Va.

3:20 p.m. "Free Flap Reconstruction of Head & Neck Defects"
Joseph C. Banis, M.D., Louisville

3:30 p.m. Resident Competition Paper—University of Kentucky

3:40 p.m. Resident Competition Paper—University of Louisville

Kentucky Psychiatric Association
Kentucky Room B—Ramada Inn
Program to be Announced

Kentucky Chapter
American College of Surgeons
General Sessions Hall
Program to be Announced

Kentucky Urological Association
Island Queen—Idlewild

1:30 p.m. "Avulsions of the Male Genitalia"
David A. Culp, M.D., Iowa City, IA

2:30 p.m. **Intermission to Visit Exhibits**

3:00 p.m. Pyelogram Conference

3:30 p.m. Business Meeting

WEDNESDAY, SEPTEMBER 21
MORNING GENERAL SESSION

General Sessions Hall

8:15 a.m.	Movie or Demonstration
8:40 a.m.	"Human Sexuality and Its Dysfunctional States" *Maj-Brett Rosenbaum, M.D., Bronx, NY*
9:00 a.m.	"The Rape Examination" *G. Richard Braen, M.D., Newton, MASS*
9:20 a.m.	"Examination of the Arthritic Hand and Wrist in the Female Patient" *S. Ashby Grantham, M.D., New York, NY*
9:40 a.m.	"Breast and Vaginal Reconstruction" *John B. McCraw, M.D., Norfolk, VA*
10:00 a.m.	Intermission to Visit Exhibits
10:30 a.m.	"Cytologic Detection of Sexually Transmitted Diseases" *William L. Betsill, Jr., M.D., Charleston, SC*
10:50 a.m.	"Male Reproductive Hazards in the Work Place" *Channing Meyer, M.D., Cincinnati, OH*
11:10 a.m.	"Hysterosalpingography in Infertility" *Heun Y. Yune, M.D., Indianapolis, IN*
11:30 a.m.	"Adolescent Sexuality—Epidemiology and Risks" *Richard R. Brookman, M.D., Richmond, VA*

PRESIDENT'S LUNCHEON
Julia Belle Room
Ramada Inn
Bluegrass Convention Center
11:50 a.m.

Dwight L. Blackburn, M.D., Berea
KMA President, Presiding

Invocation
Recognition
Awards Presentation

S. Randolph Scheen, M.D., Louisville
Chairman, KMA Awards Committee

Luncheon Speaker
Edward R. Annis, M.D.
Past President, AMA
Installation of the New KMA President

RICHARD F. LOCKEY
Tampa, Florida



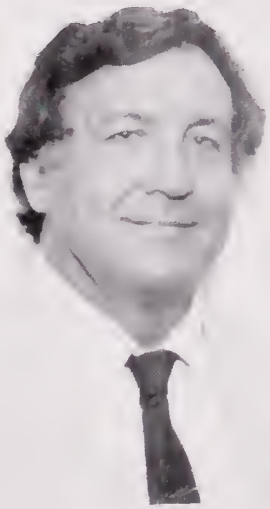
Director, Division of Allergy and Immunology, University of Southern Florida College of Medicine. Chief, Section of Allergy and Immunology, James A. Haley Veterans Administration Hospital. M.D., 1965, Temple University School of Medicine, Philadelphia. Member, AMA; Florida Medical Society; Editorial Board, *Journal of the Florida Medical Association;* Past President, Florida Allergy Society; American Association of Certified Allergists.

JAMES J. CERDA, M.D.
Gainesville, Florida



Professor of Medicine. Associate Chairman Department of Medicine, University of Florida College of Medicine, Gainesville. Director, Nutrition Lab, Gastroenterology Research and Education Unit, Department of Medicine, Florida College of Medicine, Gainesville. Member, American Federation of Clinical Research; American Association for Advancement of Science; American Society of Parenteral and Enteral Nutrition; American Institute of Nutrition; Fellow American College of Physicians. Author of numerous publications.

DENNY L. TUFFANELLI, M.D.
San Francisco, California



Private Practice of Dermatology, San Francisco. Associate Clinical Professor, University of California School of Medicine. Associate Research Dermatology, University of California School of Medicine. Chief, Immunopathology Lab, University of California School of Medicine. M.D., 1961, University of Minnesota Medical School. Chairman, Medical Advisory Board United Scleroderma Foundation. Former President San Francisco Dermatologic Society. Member, American College of Physicians; Society of Investigative Dermatology; California Medical Association; AMA.

WEDNESDAY, SEPTEMBER 21
AFTERNOON SESSION
General Sessions Hall

2:30 p.m. "Detecting Cardiovasular Stress"
Robert S. Eliot, M.D., Omaha, NE

3:30 p.m. Intermission to Visit Exhibits

4:00 p.m. "Management of Stress After Myocardial Infarction"
Robert S. Eliot, M.D.

THURSDAY, SEPTEMBER 22
MORNING GENERAL SESSION

8:15 a.m. Movie or Demonstration

9:00 a.m. "The Technology Revolution in Ophthalmology"
David L. Guyton, M.D., Baltimore, MD

9:20 a.m. "Geriatric Sexuality"
A. Alan Fischer, M.D., Indianapolis, IN

9:40 a.m. "Anaphylaxis Associate With Sexual Intercourse"
Richard F. Lockey, M.D., Tampa, FL

10:00 a.m. Intermission to Visit Exhibits

10:30 a.m. "Cleft Lip and Palate Repair"
Anthony J. Yonkers, M.D., Omaha, NE

10:50 a.m. "The Gay Bowel Syndrome"
James J. Cerda, M.D., Gainesville, FL

11:10 a.m. "Genital Herpes—Here to Stay?"
Denny Lee Tuffanelli, M.D., San Francisco, CA

11:30 a.m. "Longterm Consequences of Prenatal Medication on Gender Role and Behavior"
June Machover Reinisch, Ph.D., Bloomington, IN

AFTERNOON SESSION
SPECIALTY GROUP MEETINGS

Kentucky Society of Allergy and Clinical Immunology
Eclipse Room

1:30 p.m. "Use of Glucocortico Steroids in Treating Allergic Diseases and Asthma"
Richard F. Lockey, M.D., Tampa, FL

2:00 p.m. "Use of Aerosols in Treating Asthma"
Richard F. Lockey, M.D.

2:30 p.m. Intermission to Visit Exhibits

3:00 p.m. "Comparison of Two Intranasal Steroid Aerosols in the Treatment of Perennial Allergic Rhinitis"
Barbara Isaacs, M.D., Jeffersonville, Ind.

3:30 p.m. "Nasal Polyps, Sinusitis, Asthma, and Aspirin Intolerance"
Richard F. Lockey, M.D.

Kentucky Dermatological Society
Norton's Childrens Hospital

1:30 p.m. Clinical Cases

3:00 p.m. Discussion of Cases—Auditorium

Kentucky ENT Society
Grand Republic Room
Program to be Announced

Kentucky Academy of Eye Physicians and Surgeons
Mississippi Queen Room

1:30 p.m. "Optical Pearls and Pitfalls in Strabismus"
David L. Guyton, M.D., Baltimore, MD

1:50 p.m. "Surgical Management of Grave's Disease"
William N. Offutt, IV, M.D., Lexington

1:58 p.m. "Basal Cell Carcinoma of the Eyelid and Eyelid Reconstruction"
John W. Collins, M.D., Lexington

2:06 p.m. "Extreme Scleral Openings for Cataract Surgery: Benefits and Difficulties"
William J. Collis, M.D., Lexington

2:14 p.m. "Pigmentary Syndromes Affecting the Eye"
Donald R. Bergsma, M.D., Lexington

2:22 p.m. Discussion

2:30 p.m. Intermission to Visit Exhibits

3:00 p.m. "Macular Pucker: Treatment and Results"
Norman D. Radtke, M.D., Louisville

3:08 p.m. "Lasers: Optimal Wavelength? Red, Yellow, Blue or Bluegreen"
Charles F. Mahl, M.D., Louisville

3:16 p.m. "Pseudophakic Retinal Detachment"
Charles C. Barr, M.D., Louisville

3:24 p.m. "Macular Degeneration Complicated by Massive Hemorrhage and Angle Closure Glaucoma"
William J. Wood, M.D., Lexington

3:32 p.m. "Measurement of Retinal Visual Acuity Behind Cataracts"
David L. Guyton, M.D.
4:05 p.m. Discussion
4:20 p.m. Business Meeting
5:20 p.m. Cocktails and Hors d'oeuvres

Kentucky Chapter
American Academy of Family Physicians
Julia Belle Room
Program to be Announced

Kentucky Society for Gastrointestinal Endoscopy
Delta Queen Room

1:30 p.m. "Screening Colon Cancer"
Richard Redinger, M.D., Louisville, KY
2:00 p.m. "Gay Bowel Syndrome"
James Cerda, M.D., Gainesville, FL
2:30 p.m. Intermission to Visit Exhibits
3:00 p.m. "New Aspects of Therapeutic Endoscopy"
Stanley Benjamin, M.D., Louisville, KY
3:30 p.m. Slides and Comments

Kentucky Occupational Medical Association
Island Queen Room

1:30 p.m. "The Woman in the Work Place"
Channing Meyer, M.D., Cincinnati, OH
2:30 p.m. Intermission to Visit Exhibits
3:00 p.m. Annual Business Meeting

Kentucky Chapter
American College of Physicians
Majestic—New Orleans Room

1:30 p.m. "The Cognitive Behavioral Approach to the Treatment of Psychogenic Impotency"
Richard Welsh, MSW, Lexington
2:00 p.m. "The Acquired Immunodeficiency Syndrome"
William Templeton, M.D., Louisville
2:30 p.m. Intermission to Visit Exhibits
3:00 p.m. "The Interval of Evolution of Infarction in Patients Assessed by Positron Emission Tomography"
Janet Smith, M.D., Louisville
3:30 p.m. "Zinc in Clinical Medicine"
Craig McClain, M.D., Lexington

Kentucky Association of Public Health Physicians
Natchez Room

1:30 p.m. "Sexually Transmitted Disease Among Adolescents—Emphasis on Diagnostic Dilemmas"
Richard R. Brookman, M.D., Richmond, VA
2:30 p.m. Intermission to Visit Exhibits
3:00 p.m. "Teenage Fertility"
Gershon Bergeison, M.D., Frankfort
3:30 p.m. "Epidemiology of Cancer and Diet"
M. Ward Hinds, M.D., Frankfort

Contributions 1983 KMA Annual Meeting

AYERST LABORATORIES
685 Third Avenue
New York, NY 10017

PARKE-DAVIS
Division of Warner-Lambert Corporation
201 Tabor Road
Morris Plains, NJ 07950

GLAXO, INC.
1900 West Commercial Boulevard
Ft. Lauderdale, FL 33309

Summaries of General Sessions Presentations 1983 KMA Annual Meeting

ADOLESCENT SEXUALITY— EPIDEMIOLOGY AND RISKS

Richard R. Brookman, M.D.

Every year, a larger percent of American teenagers are experiencing a greater variety of intimate sexual behaviors with onset at increasingly younger ages. The interaction of physical and psychosocial developmental processes with familial, social, and cultural influences may produce a situation of high risk, not only for sexual intimacy, but for significant medical and/or psychological consequences.

This presentation will review recent data on adolescent psychosexual development, sexual behavior, possible etiological factors, and potential consequences, including teenaged pregnancy and parenthood, sexually transmitted infections, and the increased risk for infertility and/or genital malignancy.

CYTOLOGIC DETECTION OF SEXUALLY TRANSMITTED DISEASES

William L. Betsill, Jr., M.D.

A clinicopathological summary of sexually transmitted non-bacterial lesions affecting the genital tract. Viral, fungal, and other nonbacterial etiologies will be discussed, including Chlamydia. The prognostic implications will be discussed, particularly the neoplastic implications of the herpes virus and human papilloma virus (condyloma) virus.

BREAST AND VAGINAL RECONSTRUCTION

John B. McCraw, M.D.

Breast and vaginal reconstruction are now reliable and accepted reconstructive procedures. Our capabilities to reconstruct these difficult deformities have been enhanced by the availability of myocutaneous flaps. Most vaginal reconstructions are carried out immediately at the time of radical pelvic exenteration and dramatically improve the healing with a secondary benefit of a return to an acceptable level of sexual function. Most breast reconstructions are carried out in a delayed fashion, one to two years following mastectomy, so that the surgeon and the oncologist can feel secure about the status of the disease. With the modified radical mastectomy the breast can be reconstructed with subpectoral placement of an implant, but in the case of the radical mastectomy it is generally preferable to replace the lost tissue with either the latissimus dorsi or the rectus abdominis myocutaneous flap. The anatomical and psychological results are presented.

TUMORS OF THE PITUITARY

Leonard I. Malis, M.D.

The development of a clinical prolactin measurement has greatly altered our recognition of pituitary microadenomas as the cause of many cases of impotence, or of amenorrhea and infertility. Development of the modern high resolution CT scanners has made a major change in our diagnostic confirmation. High estrogen content in the early contraceptive medications, prior to the more recent development of lowered estrogen contraceptives, appears to have sharply altered the incidence of prolactin adenomas in young women. The development of the microsurgical transseptal, transsphenoidal approach to pituitary tumors has revolutionized the modern surgery of these lesions. The use of benign neglect, bromocriptine, radiotherapy and microsurgery will be discussed and the technique of microsurgery shown.

EXAMINATION OF THE ARTHRITIC HAND AND WRIST IN THE FEMALE PATIENT

S. Ashby Grantham, M.D.

The presentation stresses the application of anatomical knowledge and physiological testing to pathologically involved tissues. The purpose is to demonstrate that diagnostic precision can provide clues to selection of appropriate treatment.

THE TECHNOLOGY REVOLUTION IN OPHTHALMOLOGY

David L. Guyton, M.D.

The field of medicine is somewhat resistant to change, and ophthalmology is no exception. Yet, modern technology has introduced new tools and procedures which are so superior to our older ones that the practice of ophthalmology is changing before our eyes.

Some technological advances are common to all areas of medicine. Office computers can store and process patient records, communicate with third-party payors, and send letters to referring physicians. Information regarding patient diagnoses and procedures can be stored in large databases and quickly retrieved in any desired combination for clinical research. Computerized tomography has revolutionized our non-invasive radiologic capability.

Other technological advances are unique to ophthalmology. Automated diagnostic instruments are making it possible for paramedical personnel to obtain reliable information previously requiring the personal attention of the ophthalmologist. Measuring for glasses (refraction) and visual field examination (perimetry) are two such areas where microprocessor-based instruments are beginning to substitute for, and in some cases improve upon, professional skills. Automation of visual acuity testing is appearing. This is especially helpful in the non-verbal infant where a summated EEG signal over the occipital cortex, called the visual evoked potential (VEP), can measure visual function objectively.

New microsurgical instruments have made it possible to perform cataract surgery safely through much smaller incisions, shortening hospital stays and decreasing morbidity. Such instruments have also created the entire field of vitreous surgery, with better salvage of vision after trauma and treatment of numerous conditions previously considered hopeless. Other new instruments help to predict the postoperative vision before performing cataract surgery, helping to proceed confidently with surgery, or, in some cases, to avoid useless surgery.

The development of intraocular lens implants has been a highly significant event in ophthalmology, for these tiny pieces of inert plastic can provide essentially complete visual rehabilitation of the post-cataract patient. Contact lens technology has also made major advances in recent years, with "extended-wear" contact lenses now allowing full-time wear for a month at a time.

Finally, ophthalmic lasers have found increasing application in ophthalmic surgery. Originally used only for retinal diseases such as diabetic retinopathy and ocular histoplasmosis, lasers are now used for angle closure glaucoma by burning holes in the iris, for open-angle glaucoma by opening up pores in the fluid outflow channels, and for some forms of cataract surgery by cutting membranes within the eye.

The technology revolution in ophthalmology is only just beginning. Already our diagnostic and therapeutic capabilities have increased many fold. There is always the initial added cost of new innovations, but experience tends to salvage those that are truly cost-effective and to replace the others, with the end result of new and better patient care.

GENITAL HERPES—HERE TO STAY?

Denny Lee Tuffanelli, M.D.

This will be a classic presentation on genital herpes to include etiology, diagnosis, and therapy.

MANAGEMENT OF STRESS AFTER MYOCARDIAL INFARCTION

Robert S. Eliot, M.D.

The "standard" risk factors are implicated in about 50% of the new cases of cardiovascular disease. Increasingly there is evidence that 20th century stress plays an important role. In the management of stress after myocardial infarction it is important to (1) determine the antecedent stress factors, (2) identify realistic goals, (3) establish appropriate priorities, (4) learn good communication skills, (5) modify potentially self-destructive behavior, (6) reduce the frequency and number of disruptive life changes, (7) learn cognitive restructuring techniques, (8) utilize relaxation or meditation, (9) develop sensible and consistent aerobic exercise programs, (10) utilize group support systems, (11) learn the appropriate use of leisure including vacations and three-day weekends.

DETECTING THE PHYSIOLOGICAL HOT REACTOR

Robert S. Eliot, M.D.

I. TYPE A BEHAVIOR DOES NOT CORRELATE WITH METABOLIC AND PHYSIOLOGIC AROUSAL. CORREL. TYPE A & HOT REACTOR (R-value) = .1 → .3

II. AT LEAST THREE TYPES OF HOT REACTORS CAN BE IDENTIFIED. B.P. =C.O. × T.S.R. ALL OF THE FOLLOWING SIGNIFICANTLY ↑ B.P. IN RESPONSE TO MENTAL TASKS.

Types (classified by mechanism of increased B.P.)

1. OUTPUT — ↑ C.O. ; ± T.S.R.
2. COMBINED — ↑ C.O. ; ↑ T.S.R.
3. VASOCONSTRICTIVE — 0 or ↓ C.O. ; ↑ T.S.R.

III. TYPE 1—EARLY; NON-TARGET DISEASE
Rx = BETA BLOCKERS OR NON-PHARMACOLOGIC MANAGEMENT

TYPE 2—BETA BLOCKERS, VASODILATORS, AND NON-PHARMACOLOGIC MANAGEMENT

TYPE 3—VASODILATORS; DIURETICS

IV. HOT REACTING IN THE LABORATORY SETTING CORRELATES WITH:

1. FAMILY Hx OF CHD & ↑ B.P.
2. ↑ CHOLESTEROL, ↑ TRIGLYCERIDES, ↓ HDL.
3. EARLY ↑ B.P. ON TREADMILL.
4. SUBSEQUENT MAJOR CARDIOVASCULAR EVENTS.
5. AMBULATORY MONITORING AND IS A MORE ACCURATE PREDICTOR OF EXTREME PHYSIOLOGIC AROUSAL IN DAILY MENTAL TASKS.
6. METABOLIC, ENDOCRINE, AND CATECHOLAMINE RESPONSES AND REACTIVITY.

V. HOT REACTING IS CLEARLY A UNIQUE PHENOMENON DISTINCT FROM THE PHYSIOLOGIC RESPONSES OBSERVED IN NORMOTENSIVES, HYPERTENSIVES, AND BORDERLINE HYPERTENSIVES.

REFERENCES: 1. Eliot RS, Buell JC, and Dembroski TM: Bio-Behavioural Perspectives on Coronary Heart Disease, Hypertension and Sudden Cardiac Death. *Acta Med Scand* (Suppl) 660:203-213, 1982. 2. Stress and the Hot Reactor (film and monograph), Ciba-Geigy Pharmaceuticals, 556 Morris Ave., Summit, NJ 07901, 1982.

GAY BOWEL SYNDROME

James J. Cerda, M.D.

The spectrum of medical problems related to homosexual activity in men includes the five classical venereal diseases. Orogenital, ororectal and proctogenital sexual contact can result in these and other infections of the pharynx, intestinal tract and urogenital system. In addition, trauma, often in conjunction with infectious agents, plays a role in the production of diseases, particularly of the anorectal area.

There has been an alarming increase in other diseases related to homosexual activity. This includes Herpes simplex, *Giardia lamblia, Entomebae histolytica, Chlamydia trachomatis* and possibly *Campylobacter fetus ssp jejuni.* Presenting symptoms include anal discharge and rectal pain as the most common complaint. It is common to have more than one etiologic agent in this group of patients.

Because of the alarming increase in incidence in these diseases, physicians should not only be aware of their presence but should be straightforward in eliciting the historical information necessary to consider the diagnosis. An epidemiologic history of all sexual contacts should be performed and appropriate diagnostic tests for the pathogen(s) involved should be obtained from the patient. Of special importance are those agents which can be eliminated by treatment such as gonorrhea, chlamydia, trachomatis, syphillis and enteric pathogens. Simple studies such as a rectal swab culture, fecal leukocyte smear, sigmoidoscopy and rectal biopsy, as well as perhaps full gastroenterologic evaluation to assess other inflammatory diseases is necessary in this group of patients.

In addition, there has been an unprecedented outbreak of Kaposi's Sarcoma, *Pneumocystic carinii* pneumonia, and other opportunistic infections in the past several years.

References: 1. Ylvisacer JT et al: *West J Med* 1980, 132:153-157. 2. Quinn TC et al: *Am J Med* 1981, 71:395-406. 3. Sohn N: *Am J Gastro* 67:478, 1977. 4. Epidemiologic aspects of current outbreak of Kaposi's Sarcoma and opportunistic infections. *NEJM* 1981, 306:248. 5. Artnak EJ, Cerda JJ: Sexually transmitted diseases (Parts I & II) *Curr Conc Gastroenterology* 1982 (In Press).

HYSTERO-SALPINGOGRAPHY IN INFERTILITY

Heun Y. Yune, M.D., F.A.C.R.

The role of hysterosalpingography in clinical investigation of the anatomy of the uterine cavity and the fallopian tubes has been positive and widely recognized.

Congential variations and various disease state of the female internal genital organs are frequently the cause of the female infertility and when the morphology of some of these structures is altered, it can be studied accurately by hysterosalpingography.

The modified technique which the author has been using for more than the past 15 years was found to be safe and not as traumatic as the conventional technique.

The author's experience in the investigation of female infertility using hysterosalpingography will be reviewed. Number of radiographic signs which are specifically related to the infertility problem will be presented.

DYSPAREUNIA

Alan J. Wabrek, M.D.

Virtually all coitally active women have experienced some vaginal pain at some time during intercourse. The diagnosis and treatment of painful intercourse, or dyspareunia, as outlined in this article is reserved for those individuals in whom the pain has been severe, persistent, and usually of long duration.

Valet parking will be available for your convenience at the Ramada Inn/Bluegrass Convention Center during this year's KMA Annual Meeting.

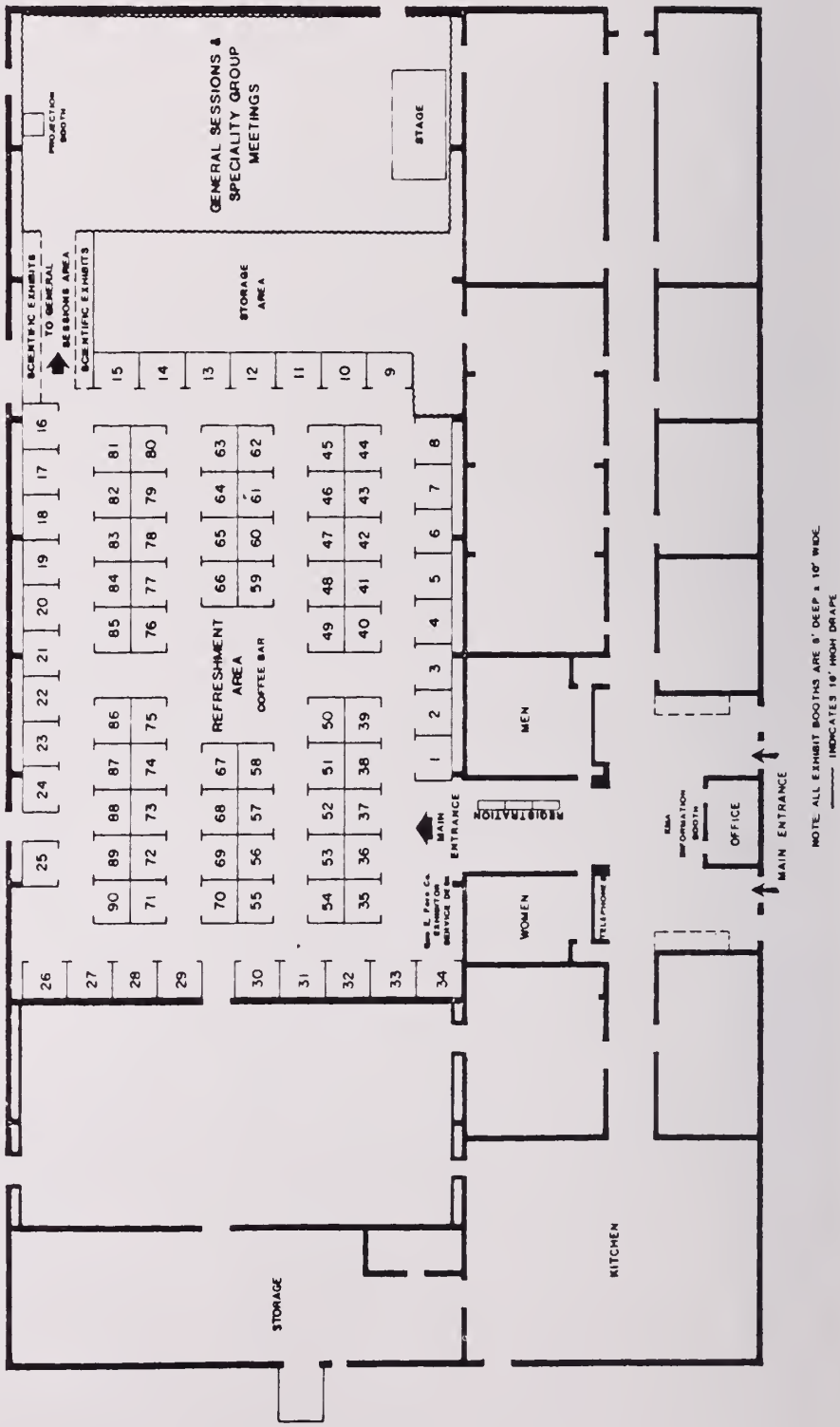
Be sure to make your reservations as soon as possible at the Ramada Inn by calling Peggy Smith (502) 491-4830.

Latest Research Advances in Products and Services Offered by 1982 Technical Exhibits

The Technical Exhibits at the 1982 KMA Annual Meeting will feature the latest developments in medical techniques and information. Located in the Lexington Center, the exhibits will condense a volume of information and ideas in such a manner that a vast amount of knowledge can be secured in a short period of time.

Prepared carefully and skillfully to appeal to you, the physician, the exhibits are especially geared to your special interests as a practitioner. Medical representatives and other exhibitors will be on hand to discuss personally their products and services with you. Both you and your patients should benefit from the information that can be gained from a visit to the Technical Exhibits.

Thirty-minute intermissions have been planned during each general and specialty group session so that every physician may take advantage of this excellent opportunity provided by the exhibits.



1983 Technical Exhibitors

A. H. Robins Company (39)
A. P. Lee Agency, Inc. (59)
Abbott Laboratories (37)
Adria Laboratories, Inc. (66)
Advanced Computer Systems, Inc. (68)
American A.C.M.I. (90)
American Physician Life (18)
Appalachian Computer Services, Inc. (86)
Ayerst Laboratories (50)

Beecham Laboratories (47)
Berlex Laboratories, Inc. (58)
Blue Cross and Blue Shield & Delta Dental of Kentucky, Inc. (21)
Boots Pharmaceuticals, Inc. (65)
Bristol Laboratories (63)
Burroughs Wellcome Co. (2)

Capital Creation Company, Inc. (10)
Cardio/Graphics, Inc. (71)
Central Pharmaceuticals, Inc. (81)
Century Patient Care Systems (79)
Charterton Hospital (87)
Chinn-Gilbert Associates (52)
Clayton L. Scroggins Associates, Inc. (14)
Crocker-Fels Company (16)

Datamax Computer Corporation (7)
Dista Products Company (13)
Division for Disability Determination (8)
Dorsey Pharmaceuticals (3)
Dupont Pharmaceuticals (31)

E. R. Squibb & Sons, Inc. (57)
Eli Lilly and Company (36)

Flint Laboratories (80)

Geigy Pharmaceuticals (61)
GLAXO, INC. (75)
Grogan's Inc. (82)
Guild of Prescription Opticians of Kentucky (38)

Health Data Network (64)
Henderman Management Services, Inc. (70)
Ho-Med Services (89)
Hoechst-Roussel Pharmaceuticals, Inc. (17)
Hospital Corporation of America (56)
Humana, Inc. (60)

Info Systems Design Corporation (74)
Insurance Corporation of America (48)
Ives Laboratories, Inc. (67)

J. B. Roerig (15)
Jewish Hospital (26)
John Hancock Mutual Life Insurance Company (35)

KEEP/SAFE of Kentucky (42)
KMA Insurance Agency, Inc. (88)
Kentucky Medical Insurance Company (20)
KMA Physicians Financial Services Federal Credit Union (19)

Lederle Laboratories (32)

Marcoin (23)
Marion Laboratories, Inc. (53)
Mead Johnson Nutritional Division (30)
Medical Protective Company (29)
Medical Publishers' Representatives, Inc. (45)
Merck Sharp & Dohme (34)
Merrell-Dow Pharmaceuticals, Inc. (28)
Miles Pharmaceuticals (6)
Monroe Systems for Business (72)

National Health Laboratories, Incorporated (22)
NCR Corporation (27)
Norwich Eaton Pharmaceuticals, Inc. (85)

Olympus Corporation of America (46)
Organon Pharmaceuticals (73)
Ortho Pharmaceutical Corporation (1)
Our Lady of Peace Hospital (69)

Pathology and Cytology Laboratories, Inc. (11)
Pharmacia Diagnostics (25)
Professional Office Systems, Inc. (62)
Pulse Systems (12)

Ransdell Surgical (5)
Record Management Systems, Inc. (84)
Reynold & Reynolds (78)
Riker Laboratories, Inc. (9)
Roche Laboratories (55)
Ross Laboratories (43)

Sandoz Pharmaceuticals (76)
Searle Laboratories (40)
Smith Kline & French Laboratories (49)
Southern Medical Association (51)

U. S. Army Medical Department (77)
U. S. Navy-Recruiting (24)
United States Air Force (41)

W. B. Saunders Company (54)
Wallace Laboratories (44)
William H. Rorer, Inc. (33)
Wyeth Laboratories (4)

Technical Exhibits—1983

A. H. ROBINS COMPANY, Richmond, VA (Booth No. 39). You are cordially invited to visit the A. H. Robins exhibit and meet our representatives who will welcome the opportunity to discuss our products; Reglan, Micro-K, Quinidex, and Dimetapp.

A. P. LEE AGENCY, INC., Louisville, KY (Booth No. 59). Disability income program—since 1939—for members and their employees. The various coverages meet your individual needs at group rates; local claim service; and we are as near as your phone, your Journal or your annual meeting.

ABBOTT LABORATORIES, North Chicago, IL (Booth No. 37). You are cordially invited to visit the Abbott exhibit which will feature E.E.S.® (erythromycin ethylsuccinate), TRANXENE® Clorazepate dipotassium) and ENDURON® (methyclothiazide tablets).

ADRIA LABORATORIES INC., Columbus, OH (Booth No. 66). Cordially invites members of the Kentucky Medical Association to visit our representatives who will be pleased to discuss with you products of interest, including AXOTAL™ for tension headache, and KAON CL™-10, potassium chloride.

ADVANCED COMPUTER SYSTEMS, INC., Louisville, KY (Booth No. 68). Micro Computer Sales and Service organization. Micro Computer sales. IBM, Columbia, Wicat, Smoke Signal, and Televideo. Application Software. Medical and business packages. Programming. Development of custom software. Service. Installation, On-Site, and Warranty repair.

AMERICAN A.C.M.I., Stamford, CT (Booth No. 90). Flexible fiberoptic instrumentation, including the following: Sigmoidoscopes, Gastroscopes, Colonoscopes, Bronchoscopes, Nephro-Choledochoscopes. Also, a complete line of Urological instrumentation for cystoscopy and TUR Procedures.

AMERICAN PHYSICIANS LIFE INSURANCE COMPANY, Pickerington, OH (Booth No. 18). American Physicians Life is a regional life insurance organization specializing in life insurance and financial planning services for physicians and their

professional corporations. American Physicians Life features a special KMA-sponsored program of coverages which includes life insurance, disability income plans, qualified pension plans, and tax-deferred annuities. American Physicians Life is also the underwriter of several KMA-sponsored group plans.

APPALACHIAN COMPUTER SERVICES, INC., London, KY (Booth No. 86).

AYERST LABORATORIES, New York, NY (Booth No. 50). Our Representatives look forward to a visit with you, and for the opportunity to discuss the Ayerst products and services of interest to you.

BEECHAM LABORATORIES, Bristol, TN (Booth No. 47). Our exhibit will concentrate on our major promoted products, AMOXIL®, FASTIN®, TIGAN®, NUCOFED®, and TICAR®. New package sizes for AMOXIL and FASTIN will be displayed, and complete prescribing information on TICAR will be available at the exhibit.

BERLEX LABORATORIES, INC., Wayne, NJ (Booth No. 58). Invites members of the Association to visit with us at our booth where we will be featuring DECONAMINE® SR (brand of chlorpheniramine maleate, d-pseudoephedrine HCl). Our technical representative will be on hand to answer your questions concerning these and our other fine products.

BLUE CROSS AND BLUE SHIELD & DELTA DENTAL OF KENTUCKY, INC., Louisville, KY (Booth No. 21). The 1983 Blue Cross and Blue Shield exhibit will offer physicians the opportunity to meet with representatives of the Provider and Professional Affairs Division. Our representatives will be present at the booth to answer any questions you may have.

BOOTS PHARMACEUTICALS, INC., Shreveport, Louisiana (Booth No. 65). The Boots exhibit will feature Rufen®, the Boots brand of ibuprofen, originally discovered and developed by its parent company, The Boots Company P.L.C., and now available in the U.S.A.; Lopurin® (allopurinol), a well-established treatment of hyperuricemia and gout; and Zorpin®, a newly-developed aspirin formulation that via its zero-order-release properties, offers a new scope to salicylate therapy.

BRISTOL LABORATORIES, Syracuse, NY (Booth No. 63). You are cordially invited to visit Bristol Laboratories' exhibit. Our representatives at the booth welcome the opportunity to answer your questions concerning the Bristol line of products featuring: Amikin® (amikacin sulfate); Bristoject® (Bristol Emergency Medication System); Bufferin®c Codeine #3 (each tablet contains 325 mg. aspirin, 48.6 mg. aluminum glycinate, 97.2 mg. magnesium carbonate and 30 mg. codeine phosphate); Cefadyl® (sterile cephapirin sodium); The Naldecon® Line (antihistamine decongestant)/EX Ped Drops/DX Ped Syrup/CX Suspension; Salutensin®/Salutensin-Demi™ (hydroflumethiazide and reserpine); Stadol® (butorphanol tartrate); Tegopen® (cloxacillin sodium); and Ultracef® (cefadroxil).

BURROUGHS WELLCOME CO., Research Triangle Park, NC (Booth No. 2). Representatives of Burroughs Wellcome Co. cordially invite you to visit our exhibit which will feature the latest product information available from B. W. Co. and provide educational material of interest to all physicians. We will be pleased to answer your inquiries on any products of interest to members and guests.

CAPITAL CREATION COMPANY, INC., Lexington, KY (Booth No. 10). Provides a financial planning service and sale of products to fulfill established objectives in financial planning.

CARDIO/GRAPHICS, Nashville, TN (Booth No. 71). Our company offers a Holter Monitoring scan service transtelephonic pacemaker evaluations, and arrhythmia recorder monitoring service. The ICR recorder, hook-up kits and all equipment necessary for each 24-hour tape are provided, at NO CHARGE, to hospitals, clinics, and private physicians. Tapes are sent to our office for scanning and within 24 hours the physician receives a report by phone. Pacemaker patients call our office, toll-free, for monthly evaluation of pacemaker function.

CENTRAL PHARMACEUTICALS, INC., Seymour, IN (Booth No. 81). Central Pharmaceuticals, Inc. cordially invites you to visit our exhibit where NIFEREX products will be featured. NIFEREX represents a unique approach to oral iron therapy and challenges the old rusty iron standards by which iron therapy has been judged. Stop by and let our technical representatives show you that taking the "ion" out of iron increases safety, efficacy and patient acceptance.

CENTURY PATIENT CARE SYSTEMS, Fort Wayne, IN (Booth No. 79). The Century Birthing Chair is totally functional—motorized so it can be raised, lowered or tilted to suit the specific needs of each birth. The Chair is easy to move and can serve several birthing areas. The Century Lift-Transfer can lift and transport a patient without the attendant having to manually lift the patient. It reduces the risk of injury to the attendant and to the patient. The unit is small, compact, and easy to maneuver.

CHARTERTON ALCOHOL & DRUG ABUSE TREATMENT HOSPITALS, LaGrange, KY (Booth No. 87). Charterton Hospitals specialize in chemical dependency inpatient care and community based services at Charterton's affiliate, CharterCare. Charterton has two separate hospital facilities, a 48 bed adult unit and an 18 bed adolescent unit. In addition to a complete nursing and medical staff, counselors, social workers, psychologists, occupational and recreational therapist and chaplains also facilitate recovery. Charterton's facilities are licensed and accredited acute psychiatric hospitals. Services are covered by most major insurance carriers, Medicare and Medicaid.

DATA-MED CORPORATION, CHINN-GILBERT ASSOCIATES, Evansville, IN (Booth No. 52). An Authorized Distributor of DATA-MED will be demonstrating DATA-MED PRACTICE MANAGEMENT SYSTEMS on mini computers using the following hardware: TEXAS INSTRUMENTS, NORTHERN TELECOM, NEC. Demonstrations and workshops will also be held regarding PROPER USE OF A COMPUTER IN YOUR PRACTICE . . . What Are The Internal Controls A Practice Should Use When a Computer Is Installed & Standard Practice Management Techniques.

CLAYTON L. SCROGGINS ASSOCIATES, INC., Cincinnati, OH (Booth No. 14). Professional practice management and financial planning for doctors exclusively. Currently over 900 active clients. Staff of over 150 qualified, experienced people providing impartial counsel in a professional, comprehensive and confidential manner. Individualized determination of each client's needs on a fee-for-service basis, offering total objectivity on which our reputation depends. Services throughout Kentucky, Ohio and Indiana.

CROCKER-FELS COMPANY, Louisville, KY (Booth No. 16). Ray Hamilton and Jim Holston, of The Crocker-Fels Company, will be on hand to welcome the members of the association, with new thoughts and old fashion service. They bring with them over 40

years of experience, backed by a company that has been in the medical profession for over 100 years. Looking forward to seeing you.

DATAMAX COMPUTER CORPORATION, Owensboro, KY (Booth No. 7). An Authorized DIGITAL Equipment Corporation Distributor, will demonstrate, MEDICOMS (Medical Insurance Communications System), the complete medical receivables management system. Medicoms provides internal controls, insurance claims form generation, statement preparation, numerous accounting and analytical features that support controlled cash management. This is accomplished with a specialized medical system and a mini-computer.

DISTA PRODUCTS COMPANY, Indianapolis, IN (Booth No. 13). You are cordially invited to visit the DISTA PRODUCTS COMPANY exhibit. Our sales representatives in attendance will welcome your questions about our pharmaceutical products.

DIVISION FOR DISABILITY DETERMINATIONS, Frankfort, KY (Booth No. 8). Under an agreement with the Dept. of Health & Human Services, we prepare Social Security & Supplemental Security Income disability determinations on Kentucky applicants. Our exhibit is staffed by members of our medical staff and disability examiners—both of whom are actively involved in adjudicating claims filed for disability benefits. We will be available to answer questions, explain criteria and talk to physicians interested in helping us evaluate over 25,000 claims per year.

DORSEY PHARMACEUTICALS, East Hanover, NJ (Booth No. 3). DORSEY PHARMACEUTICALS invites you to stop by our exhibit where our representatives will be pleased to provide information on our products and on educational materials that we have available.

DUPONT PHARMACEUTICALS, Wilmington, DE (Booth No. 31). DuPont invites doctors to stop by our booth for full prescribing information on our line of pharmaceuticals. Among others, DuPont's products include PERCODAN®, PERCOCET-5®, SYMMETREL®, NUBAIN®, NARCAN®, COUMADIN® and MOBAN®.

E. R. SQUIBB & SONS, INC., Princeton, NJ (Booth No. 57). E. R. SQUIBB & SONS, INC., has long been a leader in the development of new therapeutic agents and equipment for the prevention & treatment of diseases. You are cordially invited to meet our representatives who will be available at our exhibit to discuss our Cardiovascular Products including CORGARD® and CAPOTEN®.

ELI LILLY AND COMPANY, Indianapolis, IN (Booth No. 36). You are cordially invited to visit the ELI LILLY AND COMPANY exhibit. Our sales representatives in attendance will welcome your questions or comments about our pharmaceutical products.

FLINT LABORATORIES, Deerfield, IL (Booth No. 80). The Flint booth will feature SYNTHROID® (levothyroxine sodium), SYNTHROID for Injection, CHOLOXIN® (dextrothyroxine sodium), TRAVASE® Ointment (brand of Sutilains) and Flint SSD Cream (Silver Sulfadiazine). The Flint representatives would also be happy to discuss Continuous Subcutaneous Insulin Infusion (CSII) Therapy with the AUTO SYRINGE Insulin Pump.

GEIGY PHARMACEUTICALS, Summit, NJ (Booth No. 61).

GLAXO, INC., Ft. Lauderdale, FL (Booth No. 75).

GROGAN'S INC., Lexington, KY (Booth No. 82). We will be displaying the PURITAN-BENNETT (LSE) line of office spirometry equipment along with other recent advances in physician's office instrumentation.

GUILD OF PRESCRIPTION OPTICIANS OF KENTUCKY, Louisville, KY (Booth No. 38). Eyeglasses Adjusted—visit our booth to have your eyeglasses properly adjusted for maximum comfort and visual benefit. Minor repairs also can be made on the spot. Free Distance and Near Vision test cards, for use by the general practitioner, are offered. Your Guild Optician works closely with the ophthalmologist to provide the best in visual aid appliances. Support the Eye Physician Guild Optician type of eye services for better eye care.

HEALTH DATA NETWORK, Louisville, KY (Booth No. 64). Will present a live online computer system actually running a model practice. It will demonstrate how easily daily cash and accounts receivable can be controlled and how patient records are instantly updated and billed. Samples of patient billings, collection letters, third party payor billings and reports to aid in practice management will be available. A representative will be present to answer questions.

HENDERMAN MANAGEMENT SERVICES, INC., Louisville, KY (Booth No. 70). Providers of guaranteed Medical Management System software designed to operate on several IBM devices which differ in capacity. Henderman Management Services is installed and proven, "single source" provider of a total system. We are available to consult with you concerning present and future needs of your practice. A private video tape review of our system and printed referral lists are available upon request.

HO-MED SERVICES, Lexington, KY (Booth No. 89). A GLASROCK MEDICAL COMPANY with nine locations throughout Kentucky will be highlighting both their Home Volume Ventilation Protocol and Equipment by LIFE PRODUCTS, INC. and their Home Infant Monitoring Protocol and Equipment by HEALTHDYNE CORPORATION. Information on Medicare, Department of Labor, and other third party payors will be available as well as information and equipment displays on various types of home health equipment.

HOECHST-ROUSSEL PHARMACEUTICALS, INC., Somerville, NJ (Booth No. 17).

HOSPITAL CORPORATION OF AMERICA, Nashville, TN (Booth No. 56). HCA offers a physician placement service to the hospitals that are owned and managed by the company in the state of Kentucky.

HUMANA, INC., Louisville, KY (Booth No. 60). Louisville-based Humana Inc. owns and operates over 92 hospitals in the U.S. and abroad. We currently have attractive private practice opportunities in our Kentucky communities of Louisville, Somerset, Lexington, and Louisa. Stop by our booth and discuss these opportunities with our representatives.

INFO SYSTEMS DESIGN CORP., Louisville, KY (Booth No. 74). We will be demonstrating the MEDPAC Systems, computer solutions designed specifically for the medical profession. These systems run on IBM computers and will provide you with an extremely cost effective solution for management of your billing and receivables. In addition, the MEDPAC Systems provide you with continuing analysis of your practice. InfoSystems Design will also demonstrate

the DATABASE MANAGEMENT SYSTEM that is an excellent tool in doing research.

INSURANCE CORPORATION OF AMERICA, Houston, TX (Booth No. 48). ICA, a physician and attorney owned company, is a specialist in professional liability insurance. Headquartered in Houston, ICA is presently admitted to 31 states. Jerry Morgan, Field Operations Director, and Catherine Friedrichs, Market Planning Manager, will be available at the convention to give physicians cost comparisons and to explain some of ICA's advantages including Occurrence coverage, Prior Acts Endorsements and unexcelled claims defense.

IVES LABORATORIES, INC., New York, NY (Booth No. 67).

J. B. ROERIG, Edgewood, KY (Booth No. 15).

JEWISH HOSPITAL, Louisville, KY (Booth No. 26). The exhibit will feature a number of the specialty services offered at Jewish Hospital. A videotape monitor will be utilized to highlight some of these programs and technologies.

JOHN HANCOCK MUTUAL LIFE INSURANCE COMPANY, Louisville, KY (Booth No. 35). John Hancock sells all types of Life Insurance—including our new product, the Variable Whole Life Insurance Contract. And Remember, "WE SERVICE WHAT WE SELL."

KEEP/SAFE OF KENTUCKY, Anchorage, KY (Booth No. 42). Fireproof Safes & Files.

KENTUCKY MEDICAL INSURANCE COMPANY, Louisville, KY (Booth No. 20). Kentucky Medical Insurance Company, organized by the Kentucky Medical Association, is a professional liability insurance company owned by physicians, run by professionals, with physician input in all areas in which there is need of physician expertise. We welcome the opportunity to discuss the advantages and benefits represented by our program of coverage.

KMA INSURANCE AGENCY, Louisville, KY (Booth No. 88). KMA Insurance Agency formed by the Kentucky Medical Association offers a variety of insurance products specifically designed for physicians. Such as Office Protection, Workers Compensation, Homeowners, Automobile, Office Overhead, Life, Disability and other types of Insurance. Stop by and see what we can do for you. We welcome your visit.

KMA PHYSICIANS FINANCIAL SERVICES, FEDERAL CREDIT UNION, Louisville, KY (Booth No. 19). Was organized and chartered for the benefit of Physician Members of the KMA, their employees and families. We are currently offering a full range of financial services including checking accounts, insured Money Market accounts, VISA and Mastercard Credit Cards, as well as a full range of savings plans. Our VISA and Mastercard Credit Cards are offered at 15% APR with no fees or service charges. Our basic checking account (Share Draft) has no minimum and no fees.

LEDERLE LABORATORIES, Wayne, NJ (Booth No. 32). You are invited to visit booth number 32 where Lederle representatives will provide information on PIPRACIL™, piperacillin sodium, a new parenteral semi-synthetic penicillin with potent broad-spectrum bactericidal activity against gram negative, gram positive, aerobic and anaerobic pathogens associated with uncomplicated and serious infection; and ASENDIN® amoxapine, indicated in the relief of symptoms due to depression and characterized by rapid onset of action; also CYCLOCORT® amcinonide cream .01% with AQUATAIN® moisturizing base.

MARCOIN MANAGEMENT SERVICE, 10337 Linn Station Road, Louisville, KY (Booth No. 23). MARCOIN has been doing computers for nearly 20 years. We offer a complete line of computers and software designed for Medical practices of all sizes. We also specialize in business management consulting, tax, accounting and computerized billing services for Doctors.

MARION LABORATORIES, INC. Kansas City, MO (Booth No. 53). We are proud to be in attendance again this year, and hope you will stop by and let our representatives answer your questions about any of our fine pharmaceuticals. Featured will be our exciting, new patient-benefit products; CARDIZEM® (diltiazem HCl) our calcium channel blocker, and CARAFATE® (sucralfate) our new nonsystemic product for treatment of peptic ulcer.

MEAD JOHNSON NUTRITIONAL DIVISION, Evansville, IN (Booth No. 30). We cordially invite you to visit the Mead Johnson Nutritional Division exhibit and meet our local representatives who welcome the opportunity to discuss products and services of interest to you. Featured will be infant formulas, pediatric vitamins, and adult nutritionals.

THE MEDICAL PROTECTIVE COMPANY, Fort Wayne, IN (Booth No. 29). As befits the First Company in the professional liability field, The Medical Protective Company provides unexcelled protection in any claim for damages based on professional services rendered or which should have been rendered. The Company's experience from the successful handling of over 135,000 claims during eighty-four years of Professional Protection Exclusively is unparalleled in the professional liability field.

MEDICAL PUBLISHERS' REPRESENTATIVES, INC., Cincinnati, OH (Booth No. 45). Medical books published by: WILLIAMS & WILKINS; McGRAW-HILL; APPLETON-CENTURY-CRURTS; LEA & REBIGER; CIBA; SPRINGER-VERLAG; MASSON; URBAN-SCHUARZENBERG; CHURCHILL-LIVINGSTONE AND GRUNE-STRATTON WILL BE ON DISPLAY.

MERCK SHARP & DOHME, West Point, PA (Booth No. 34).

MERRELL-DOW PHARMACEUTICALS, INC., Cincinnati, OH (Booth No. 28). Manufacturers of LORELCO (probucol) for the treatment of elevated serum cholesterol, BRICANYL (terbutaline) a beta agonist for the treatment of broncospasm, NOVAFED-A a decongestant, antihistaminic, and CEPACOL mouthwash/gargle for daily oral care.

MILES PHARMACEUTICALS, West Haven, CT (Booth No. 6). Cordially invites you to visit their exhibit featuring its new injectable antibiotic's (mezlocillin sodium IV/IM use) brand name MEXLIN™ and (azlocillin sodium IV/IM use) brand name AZLIN™ the first of a new generation of semisynthetic penicillins, the acylureidopenicillins. Also featured will be MYCELEX-G™, MYCELEX™ and TRIDESILON™ products. Representatives in attendance welcome your questions about MILES PHARMACEUTICAL PRODUCTS, a new force in therapeutic progress parented by the company responsible for the pioneering of antibiotics.

MONROE SYSTEMS FOR BUSINESS, Louisville, KY (Booth No. 72). The exhibit will contain the Monroe Computer System with our complete medical billing program. Demonstrations on this package, as well as any other ancillary programs that a practice could utilize, will be provided.

NATIONAL HEALTH LABORATORIES, INCORPORATED, Louisville, KY (Booth No. 22). National Health Laboratories, Incorporated (NHL) offers complete clinical and anatomical laboratory services to area physicians, hospitals, clinics and other medical facilities. Locally, N.H.L. offers these

services through multiple laboratory locations. Each laboratory is under the direction of a board certified pathologist. N.H.L.'s booth will highlight its capabilities in the areas of rapid electronic test result delivery, state of the art technology and reliable local service.

NCR CORPORATION, Lexington and Louisville, KY (Booth No. 27). Our representatives welcome the opportunity to answer your questions concerning the NCR computers and Medical Management System programs for doctors and clinics ranging from a solo practice through the largest multi-specialty groups. Specific applications include: Patient and third-party billing and statements, missed appointment and fee slip reporting, chart location and refile reports, delinquent balance reports, production reports, patient recall, collection, payment plan, scheduling, hospital ATD, prescription and medical database subsystems.

NORWICH EATON PHARMACEUTICALS, INC., Norwich, NY (Booth No. 85). Your Norwich Eaton representatives wish you a successful 1983 meeting. Complete information on Norwich Eaton products and professional services is available at the Norwich Eaton exhibit.

OLYMPUS CORPORATION OF AMERICA, Louisville, KY (Booth No. 46). Our booth is showing the finest Olympus Flexible Fiberscopes, Gastroscopes, Colon fiberscopes, Broncho fiberscopes, and the Equipment to do Endoscopic Photography. We will be showing the new Primary Care Flexible Sigmoidoscope for use in office screening for colon-rectal cancer. We will also have the new rigid line of Laparoscopes and Resectoscopes. Today "OLYMPUS" is a name synonymous with precision.

ORGANON PHARMACEUTICALS, West Orange, NJ (Booth No. 73).

ORTHO PHARMACEUTICAL CORPORATION, Raritan, NJ (Booth No. 1). ORTHO PHARMACEUTICAL CORPORATION is proud to present the most complete line of medically accepted products for the control of conception. Also on display will be our well-known products for the treatment of various forms of vaginitis. Your questions will be welcome.

OUR LADY OF PEACE HOSPITAL, 2020 Newburg Road, Louisville, KY (Booth No. 69). The region's largest psychiatric hospital, has 416 private and semi-private beds. A short term, acute private psychiatric facility, the hospital offers full general psychiatric services. In addition, there are special programs for substance abuse and for adolescents with emotional and psychological problems. A staff physician can admit patients on a 24-hour a day basis. All health insurance plans with valid psychiatric coverage are accepted.

PATHOLOGY AND CYTOLOGY LABORATORIES, INC., Lexington, KY (Booth No. 11). Provides services for physicians, hospitals, nursing homes, and industries throughout Kentucky. The laboratory is owned and directed by pathologists.

PHARMACIA DIAGNOSTICS, Piscataway, NJ (Booth No. 25). Will be presenting their Total Allergy Management System: this includes RAST®, IgE PRIST®, IgE PRIST® Interface, Allergen Extracts, PHADEZYM Analyser, PHOCUS computer, as well as educational and marketing services for the physician.

PROFESSIONAL OFFICE SYSTEMS, INC., Louisville, KY (Booth No. 62). Professional Office Systems, Inc. with sales offices in Louisville, Lexington and Huntington, will have on display their color coded filing systems and equipment as well as complete pegboard accounting systems. Please stop by our booth and discuss your specific needs with one of our representatives.

PULSE® SYSTEMS A DIVISION OF CHARLES LEICH & CO., Evansville, IN (Booth No. 12). Pulse® Systems markets the PULSE® MEDICAL SYSTEM a computer system, for the management of medical practitioners office. The PMS® handles all the daily functions that a dentist or a physician would perform in his office. These include appointment scheduling, accounts receivable, third party billing, daily cash payment posting and the necessary daily reports for the efficient management of today's medical office.

RANSDELL SURGICAL, Louisville, KY (Booth No. 5). We will exhibit a combination of new equipment, disposable goods and some service capabilities that are unique to Ransdell Surgical. We look forward to welcoming you to our booth.

RECORD MANAGEMENT SYSTEMS, INC., Hopkinsville, Kentucky (Booth No. 84). Filing Systems, Pegboard Accounting Systems, Stationary, and mobile shelving.

REYNOLDS & REYNOLDS, Dayton, OH (Booth No. 78). Reynolds & Reynolds experience with the medical profession goes back to 1957. In short, we know and understand the application of computers to the medical field. Reynolds & Reynolds has designed a comprehensive computer system that can help you run your practice more efficiently. THE R & R MEDICAL PRACTICE MANAGEMENT SYSTEM is designed to allow group practice physicians to handle today's complicated billing problems with ease. Please stop by and ask for a personal demonstration of our R & R MPMS System.

RIKER LABORATORIES, INC./3M, Northridge, CA (Booth No. 9). NORGESIC® FORTE, DISALCID®, THEOLAIR™, CALSUP™.

ROCHE LABORATORIES, Nutley, NJ (Booth No. 55).

ROSS LABORATORIES, Columbus, OH (Booth No. 43). Ross Laboratories is pleased to share our choice of infant nutritionals. We'll be featuring Similac, Similac with Iron, and Similac with Whey. We'll also be sharing our service and educational items.

SANDOZ PHARMACEUTICALS, East Hanover, NJ (Booth No. 76). Sandoz Pharmaceuticals invites you to stop by our exhibit where our representative(s) will be pleased to provide information on our products or on educational materials that we have available.

SEARLE LABORATORIES, Chicago, IL (Booth No. 40). You are cordially invited to visit the SEARLE booth where our representatives will be happy to answer any questions regarding SEARLE Products. Featured will be information on ALDACTAZIDE®, ALDACTONE®, CU-7®, / MARK-7™, / TATUM-T™, / DEMULEN®, CALAN™, DIULO™, DRAMAMINE®, FLAGYL®, / FLAGYL-I.V.™, LOMOTIL®, METAMUCIL®, NITRODISC™, NORPACE®, OVULEN®, PRO-BATHINE®, and other drugs of interest.

SMITH KLINE & FRENCH LABORATORIES, Philadelphia, PA (Booth No. 49). Representatives will be on hand to answer your specific questions and to provide information on our products and services.

SOUTHERN MEDICAL ASSOCIATION, Birmingham, AL (Booth No. 51). Southern Medical will have information available on the advantages of membership, such as continuing medical education—Dial Access, Regional Postgraduate Conferences, Leadership Seminars, Medical Malpractice Seminars, the Annual Scientific Assembly, and the SOUTHERN MEDICAL JOURNAL. Also available will be material on financial

benefits to members, such as the IRA, Retirement and Insurance Programs, Research Project Fund, and Loans and Scholarships.

US ARMY MEDICAL DEPARTMENT, Washington, DC (Booth No. 77). Physician Placement service for the entire US Army Medical Department. We will be providing information about the Health Professions Scholarship Program for medical students, about Internship/Residency/Fellowship opportunities, and the plethora of placement opportunities for physicians in all specialties.

NAVY MEDICAL PROGRAMS, NAVY RECRUITING DISTRICT, Louisville, KY (Booth No. 24). We will have an audio visual presentation concerning Computer Assisted Diagnosis of Acute Abdominal Pain as used by medical personnel aboard deployed submarines. In addition, literature and medical personnel will be available to answer questions and assist physicians interested in a medical practice with the United States Navy.

UNITED STATE AIR FORCE—HEALTH PROFESSIONALS, Nashville, TN (Booth No. 41). The Air Force has one of the best health care systems in our nation. It offers many unusual professional and personal opportunities. We have over 100 hospitals and clinics throughout the free world. Physicians are supported by a team of trained associates, people dedicated to the ideals which have made America great. We believe the Air Force is a great way of life!

W. B. SAUNDERS COMPANY, Philadelphia, PA (Booth No. 54). Medical book publishers featuring new editions of: Sleisenger: Gastroenterology 3rd ed., Nelson Textbook of Pediatrics 12th ed., Schaffer's Diseases of the Newborn 5th ed., Sabiston & Spencer: Gibbon's Surgery of the Chest 4th ed. Also: Tardy—Rhinoplasty, Raz—Female Urology, AMA Drug Evaluations, AMA Pre. & Postoperative Care 3rd ed., Branch—Office Practice of Medicine, and Cecil Textbook of Medicine 16th ed. Salesman: John Lieb.

WALLACE LABORATORIES, Cranbury, NJ (Booth No. 44). We invite you to visit our booth where the Wallace Sales Representatives will be pleased to furnish information regarding Wallace products and your related medical questions.

WILLIAM H. RORER, INC., Fort Washington, PA (Booth No. 33). Our representatives are available and will discuss with you pharmaceutical specialties manufactured by Rorer: MAALOX®, MAALOX® PLUS, MAALOX® THERAPEUTIC CONCENTRATE, ASCRIPTIN®, ASCRIPTIN®A/D, GEMNISYN™, PERDIEM™, SLO-PHYLLIN®, SLO-BID™, and FEDAHIST®.

WYETH LABORATORIES, Philadelphia, PA (Booth No. 4). Ativan®, Cyclapen-W®; Nordette®, Tubex®. ATIVAN® (lorazepam) Ⓡ Wyeth. Each tablet contains 0.5 mg, 1 mg, or 2 mg of lorazepam. CYCLAPEN-W® (cyclacillin) Wyeth. Available as 250 mg or 500 mg yellow capsule-shaped scored tablets. TUBEX® Closed Injection System, Wyeth, is the largest line of prefilled small-volume injectables available. NORDETTE® Each tablet contains 0.15 mg levonorgestrel with 0.03 mg ethinyl estradiol, Wyeth.

SCIENTIFIC EXHIBITS

Visceral Perforation Following Blunt Abdominal Trauma in Childhood, DILLER B. GROFF, M.D.

Salicylic Pharmacokinetics and Reye's Syndrome, GEORGE C. RODGERS, JR., M.D., LEONARD B. WEINER, M.D., CHARLES H. JARBOE, Ph.D., JULIA A. McMILLAN.

Seasonal Variations in Poisoning—Implications for Patient Education, GEORGE C. RODGERS, JR., M.D., PAMELA DOWLAND, NANCY EDWARDS, Pharm.D.

Primary Chest Wall Tumors, SIBU P. SAHA, M.D., PORTER MAYO, M.D., GRAYDON A. LONG, M.D., R. DALEY GOFF, M.D.

Open Cancellous Bone Grafting In the Management of Chronic Osteomyelitis, BIJAN AHMADI, M.D., BENNETT D. COTTON, M.D., D. KAY KIRKPATRICK, M.D., JAMES W. HARKESS, M.B., Ch.B, WILLIAM C. RAMSEY, M.D., WAYNE W. KOTCAMP, M.D.

Acute Pancreatitis: Role of Adreno-Coeliac Neural Blockade, JOHN B. FLOYD, JR., M.D., FACS.

The Medical Effects of Nuclear War, DORIS PIPKIN, M.D.

Anesthesia Monitoring in the Operating Room, LEWIS ROWE, M.D., STEVEN AARON, M.D.

The KMA has approved this program for 15½ hours Category 1 Credit. The KMA is accredited by the Accrediting Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians. The specialty groups at the Annual Meeting are approved for Category 1 Credit. The total number of actual hours offered to physicians at the Annual Meeting will be in excess of 60 hours. Maximum number of hours a physician may obtain for three days attendance is 15½. Hours are determined by actual time at presentations, more than 15 minutes is rounded to the nearest half hour and more than 45 minutes is rounded to the next full hour.

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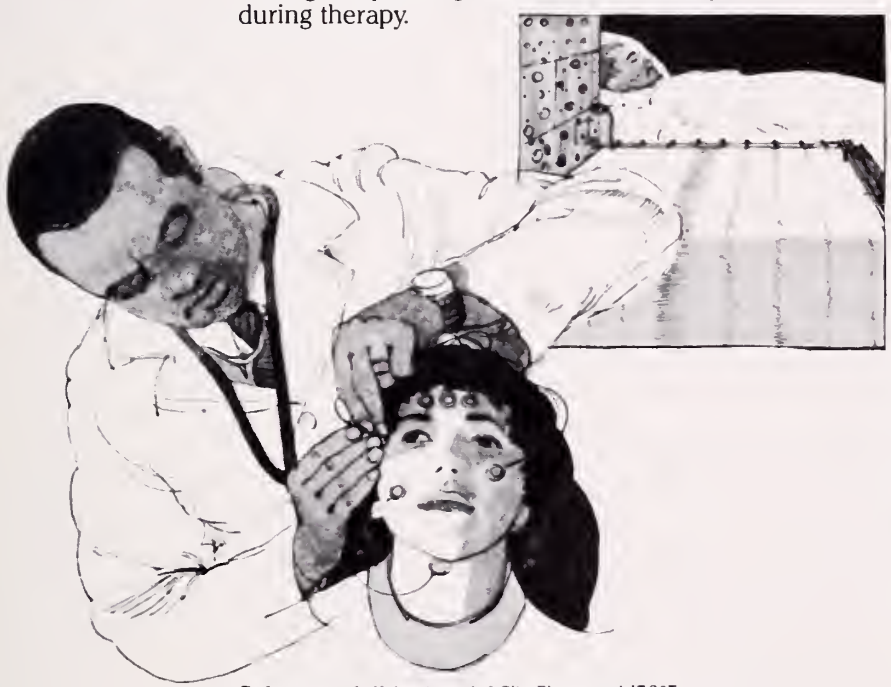
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References: 1. Kales A *et al: J Clin Pharmacol 17*:207-213, Apr 1977 and data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Kales A: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **4.** Kales A *et al: JAMA 241*:1692-1695, Apr 20, 1979. **5.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 15, 1978. **6.** Kales A *et al: Clin Pharmacol Ther 19*:576-583, May 1976. **7.** Kales A, Kales JD: *Pharmacol Physicians 4*:1-6, Sep 1970. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Dement WC *et al: Behav Med 5*:25-31, Oct 1978. **10.** Vogel GW: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **11.** Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington, DC, May 3-7, 1971. **12.** Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytime sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. **13.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.
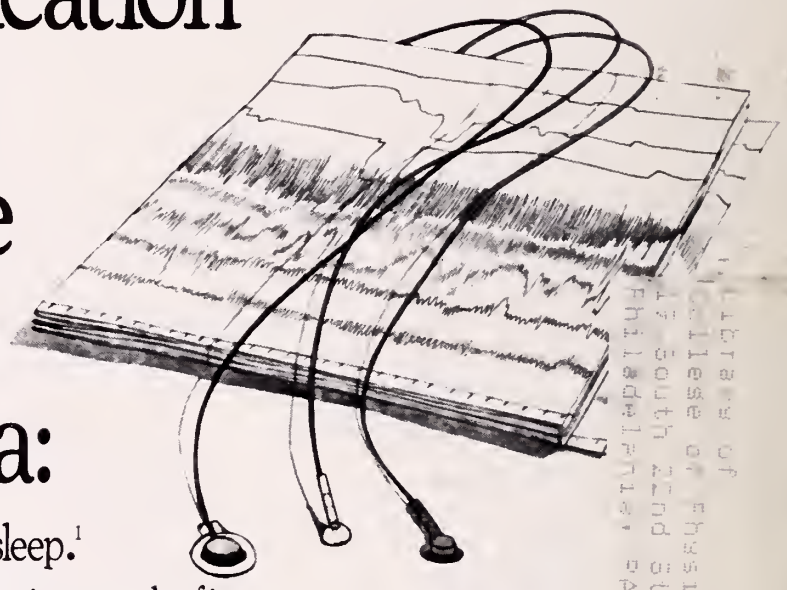
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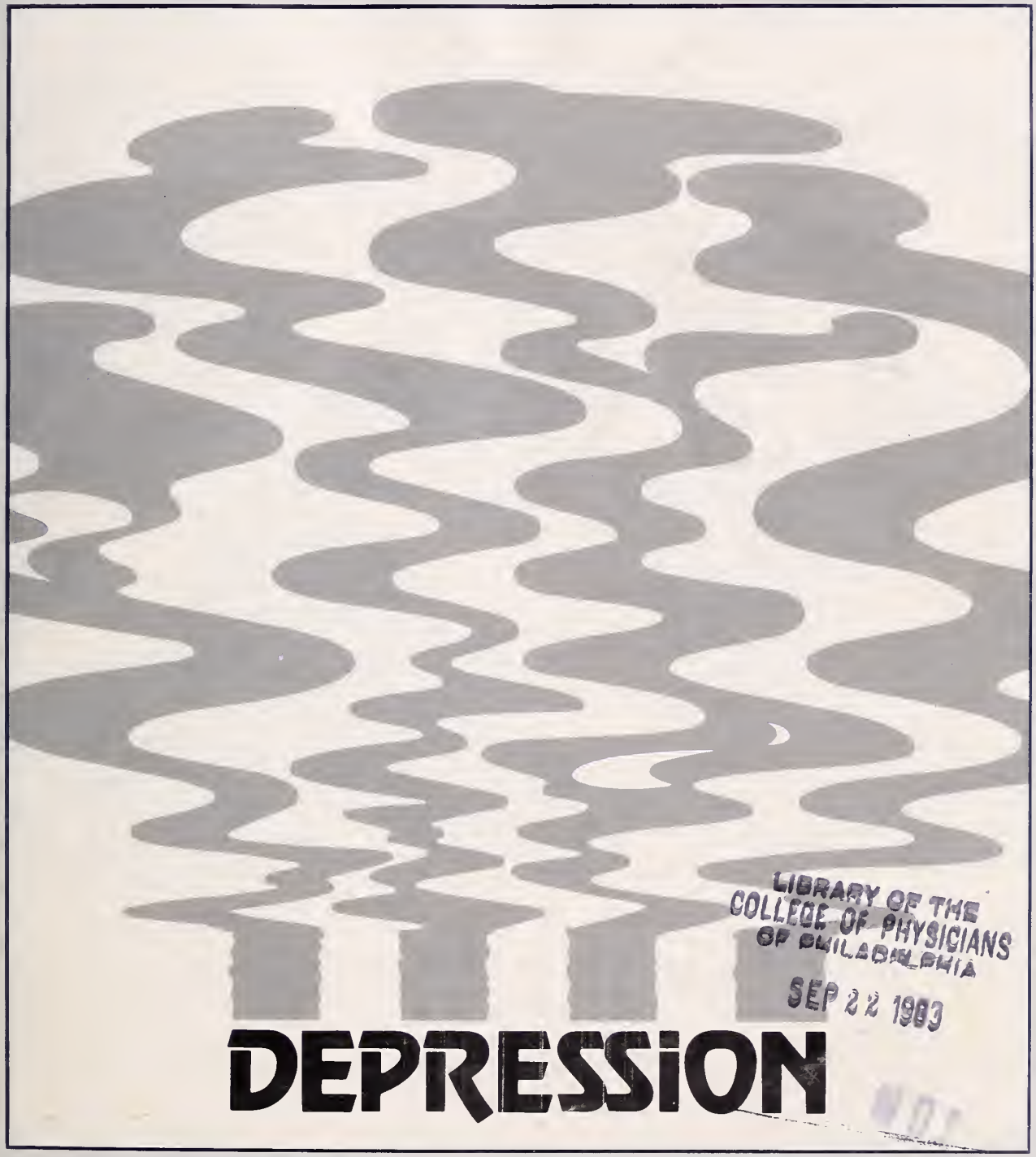
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Volume 81, Number 9 September 1983

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WARNINGS: Ru-Tuss Tablets may cause drowsiness. Patients should be warned of possible additive effects caused by taking antihistamines with alcohol, hypnotics, sedatives or tranquilizers.

PRECAUTIONS: Ru-Tuss Tablets contain belladonna alkaloids, and must be administered with care to those patients with urinary bladder neck obstruction. Caution should be exercised when Ru-Tuss Tablets are given to patients with hypertension, cardiac or peripheral vascular disease or hyperthyroidism. Patients should avoid driving a motor vehicle or operating dangerous machinery (See WARNINGS:).

OVERDOSAGE: Since the action of sustained release products may continue for as long as 12 hours, treatment of overdoses directed at reversing the effects of the drug and supporting the patient should be maintained for at least that length of time. Saline cathartics are useful for hastening evacuation of unreleased medication. In children and infants, antihistamine overdosage may produce convulsions and death.

ADVERSE REACTIONS: Hypersensitivity reactions such as rash, urticaria, leukopenia agranulocytosis, and thrombocytopenia may occur. Other adverse reactions to Ru-Tuss Tablets may be drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension/hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerostomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, dizziness and insomnia. Large overdoses may cause tachypnea, delirium, fever, stupor, coma and respiratory failure.

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7th	WILLIAM P. McELWAIN, 321 South Main Street, Lawrenceburg 40342-502/839-6981	1985
8th	ROBERT E. SMITH, One West 43rd Street, Covington 41015-606/431-3748	1984
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Agent of change

Ativan®
for (lorazepam) IV
Anxiety

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NEW TABLET DESIGN 0.5, 1.0 and 2.0 mg

Brief Summary of Prescribing Information.

Indications and Usage: Management of anxiety disorders or short-term relief of symptoms of anxiety or anxiety associated with depressive symptoms. Anxiety or tension associated with stress of everyday life usually does not require treatment with an anxiolytic.

Effectiveness in long-term use, i.e., more than 4 months, has not been assessed by systematic clinical studies. Reassess periodically usefulness of the drug for the individual patient.

Contraindications: Known sensitivity to benzodiazepines or acute narrow-angle glaucoma.

Warnings: Not recommended in primary depressive disorders or psychoses. As with all CNS-acting drugs, warn patients not to operate machinery or motor vehicles, and of diminished tolerance for alcohol and other CNS depressants.

Physical and Psychological Dependence: Withdrawal symptoms like those noted with barbiturates and alcohol have occurred following abrupt discontinuance of benzodiazepines (including convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Addiction-prone individuals, e.g. drug addicts and alcoholics, should be under careful surveillance when on benzodiazepines because of their predisposition to habituation and dependence. Withdrawal symptoms have also been reported following abrupt discontinuance of benzodiazepines taken continuously at therapeutic levels for several months.

Precautions: In depression accompanying anxiety, consider possibility for suicide.

For elderly or debilitated patients, initial daily dosage should not exceed 2mg to avoid oversedation. Terminate dosage gradually since abrupt withdrawal of any antianxiety agent may result in symptoms like those being treated: anxiety, agitation, irritability, tension, insomnia and occasional convulsions. Observe usual precautions with impaired renal or hepatic function. Where gastrointestinal or cardiovascular disorders coexist with anxiety, note that lorazepam has not been shown of significant benefit in treating gastrointestinal or cardiovascular component. Esophageal dilation occurred in rats treated with lorazepam for more than 1 year at 6mg/kg/day. No effect dose was 1.25mg/kg/day (about 6 times maximum human therapeutic dose of 10mg/day). Effect was reversible only when treatment was withdrawn within 2 months of first observation. Clinical significance is unknown, but use of lorazepam for prolonged periods and in geriatrics requires caution and frequent monitoring for symptoms of upper G.I. disease. Safety and effectiveness in children under 12 years have not been established.

ESSENTIAL LABORATORY TESTS: Some patients have developed leukopenia, some have had elevations of LDH. As with other benzodiazepines, periodic blood counts and liver function tests are recommended during long-term therapy.

CLINICALLY SIGNIFICANT DRUG INTERACTIONS: Benzodiazepines produce CNS depressant effects when administered with such medications as barbiturates or alcohol.

CARCINOGENESIS AND MUTAGENESIS: No evidence of carcinogenic potential emerged in rats during an 18-month study. No studies regarding mutagenesis have been performed.

PREGNANCY: Reproductive studies were performed in mice, rats, and 2 strains of rabbits. Occasional anomalies (reduction of tarsals, tibia, metatarsals, malrotated limbs, gastroschisis, malformed skull and microphthalmia) were seen in drug-treated rabbits without relationship to dosage. Although all these anomalies were not present in the concurrent control group, they have been reported to occur randomly in historical controls. At 40mg/kg and higher, there was evidence of fetal resorption and increased fetal loss in rabbits which was not seen at lower doses. Clinical significance of these findings is not known. However, increased risk of congenital malformations associated with use of minor tranquilizers (chlordiazepoxide, diazepam and meprobamate) during first trimester of pregnancy has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, use of lorazepam during this period should almost always be avoided. Possibility that a woman of child-bearing potential may be pregnant at institution of therapy should be considered. Advise patients if they become pregnant to communicate with their physician about desirability of discontinuing the drug. In humans, blood levels from umbilical cord blood indicate placental transfer of lorazepam and its glucuronide.

NURSING MOTHERS: It is not known if oral lorazepam is excreted in human milk like other benzodiazepines. As a general rule, nursing should not be undertaken while on a drug since many drugs are excreted in milk.

Adverse Reactions, if they occur, are usually observed at beginning of therapy and generally disappear on continued medication or on decreasing dose. In a sample of about 3,500 anxious patients, most frequent adverse reaction is sedation (15.9%), followed by dizziness (6.9%), weakness (4.2%) and unsteadiness (3.4%). Less frequent are disorientation, depression, nausea, change in appetite, headache, sleep disturbance, agitation, dermatological symptoms, eye function disturbance, various gastrointestinal symptoms and autonomic manifestations. Incidence of sedation and unsteadiness increased with age. Small decreases in blood pressure have been noted but are not clinically significant, probably being related to relief of anxiety.

Overdosage: In management of overdosage with any drug, bear in mind multiple agents may have been taken. Manifestations of overdosage include somnolence, confusion and coma. Induce vomiting and/or undertake gastric lavage followed by general supportive care, monitoring vital signs and close observation. Hypotension, though unlikely, usually may be controlled with Levarterenol Bitartrate Injection U.S.P. Usefulness of dialysis has not been determined.

Ativan® (IV)
for (lorazepam)
Anxiety

DOSAGE: Individualize for maximum beneficial effects. Increase dose gradually when needed, giving higher evening dose before increasing daytime doses. Anxiety, usually 2-3mg/day given b.i.d. or t.i.d.; dosage may vary from 1 to 10mg/day in divided doses. For elderly or debilitated, initially 1-2mg/day; insomnia due to anxiety or transient situational stress, 2-4mg h.s.

HOW SUPPLIED: 0.5, 1.0 and 2.0mg tablets.

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Health and Safety Tip From the American Medical Association

MARKERS LISTED TO IDENTIFY ALCOHOLICS

How can you tell that a regular, heavy drinker has crossed over the line and become an alcoholic, who no longer can control his or her drinking?

The American Medical Association in its Manual on Alcoholism points to some markers to help identify the alcoholic.

1. Increasing consumption of alcohol, with frequent, perhaps unintended, episodes of intoxication.

2. Drinking to handle problems or relieve symptoms.

3. Obvious preoccupation with alcohol and the frequent need to have a drink.

4. Surreptitious drinking or gulping of drinks.

5. Tendency toward making alibis and weak excuses for drinking.

6. Refusal to concede what is obviously excessive consumption and expressing annoyance when the subject is mentioned.

7. Frequent absenteeism from the job, especially following weekends and holidays.

8. Repeated changes in jobs, particularly if to successively lower levels, or employment in a capacity beneath ability, education and background.

9. Shabby appearance, poor hygiene, and behavior and social adjustment inconsistent with previous levels or expectations.

10. Persistent vague physical complaints without apparent cause, particularly insomnia, stomach upsets, headaches, loss of appetite.

11. Multiple contacts with the health care system with disorders that are alcohol caused or related.

12. Persistent marital and family problems, perhaps with multiple marriages.

13. History of arrests for drunkenness or drunken driving.

Submitted by the KMA Impaired Physicians' Committee

PRESIDENT'S PAGE



As I write the final edition of the President's page for my year as President of KMA, it is with some satisfaction that I can still refer to the FREE ENTERPRISE practice of medicine. Over the years since 1968, the Federal government and other third party payors have continued to gnaw at our entrails until they have just about succeeded in gaining complete control and socialization of medicine. In my opinion, we can still regain our proper prospective if we will unite and work together for the total enhancement of medical care in our country.

I again must encourage you each to become a member and partner of organized medicine and to join KEMPAC in order to make our weight felt in the political arena. No longer can a few physicians spar with the bureaucratic machine and expect to gain ground. KEMPAC needs YOUR support and help and it is needed NOW!

I am proud of the year and the accomplishments we have been able to achieve. The new addition to our building is completed and occupied and the older part of the building has been renovated and refurbished. If you haven't been in the building you should make a special effort to stop by and see it.

The creation of the Physicians Services, Inc. A Holding Company, has greatly expanded the possibilities of service to its membership by KMA—through this instrument, we have already chartered the Kentucky Physicians Financial Services, Inc. a Federal Credit Union. The Credit Union has been in business since March 28, 1983, and already has assets of $1.5 million—membership is growing daily and our loans and credit card features are rapidly becoming our most marketable product. In addition to this, KMA is in the process of chartering a computer services company which will give needed advice and information to physician offices when they are ready for computerization. I am sure much more will be forthcoming about this adventure.

The KMA Insurance Agency is growing by leaps and bounds. Our multiline policy sales are steadily increasing and life insurance sales are also progressing nicely. KMIC can now boast of being the largest insuror of Kentucky physicians for malpractice insurance and here again our members continue to grow and we have assets in excess of $10 million.

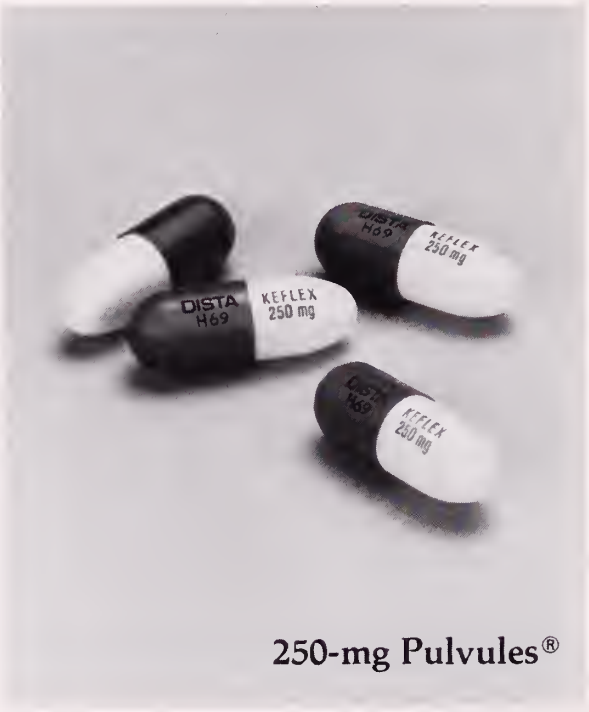
Your KMA staff continues to be both diligent and competent in performing their daily duties. KMA is very fortunate to be administered by Bob Cox and his excellent staff. Unless you have had the experience of day to day contact with these individuals you cannot realize how many problems they take care of or how varied these problems may be. I suggest you give them a kind word whenever possible, as an encouraging word many times helps in solving the unsolvable situation.

There is much more that could be said, however, I want to close by thanking the KMA membership for allowing me to serve as your President for this year. It has been a most gratifying and rewarding experience for me. I have met many of you over the year and will cherish these friendships from now on.

If we all join and work together KMA will continue to grow and flourish. We just might be able to preserve FREE ENTERPRISE medicine.

Dwight L. Blackburn, M.D.
President, KMA

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Standard and Newly-Available Antidepressant Drug Treatments

STEVEN LIPPMANN, M.D.

Antidepressant drugs are prescribed for persons with depression accompanied by its typical physiologic dysfunctions. The patient requires a good medical evaluation. Suicidal ideation is always assessed. Treating the pregnant patient requires further precaution. Antidepressants are not suggested for acute grief reactions. Several newly available antidepressant drugs are now marketed; there is an indication that these medicines may be safer than some of the older varieties. Cardiac conduction prolongations and atropine-like, anticholingeric effects are the most common antidepressant side effects. Overdoses with antidepressants are dangerous! Depressed patients require prolonged and closely supervised therapy both during active treatment and when the antidepressant medications are being reduced in dosage.

Depression is an important public health problem and frequent primary ailment in most patient populations. Its presence complicates, exaggerates, and masks other pathologies; it also compromises their treatment. Note that most successful suicides are completed within a month of the patient's last physician visit—a critical clinical and medicolegal fact.

Overt depression is not difficult to recognize. It is characterized by prolonged sadness, untypical for the patient and usually associated with characteristic physical dysfunctions, common for depressed patients. These dysfunctions include: weight loss, sleep and appetite suppression, loss of interest and energy, etc. Early morning awakening is the most significant sleep disturbance. Depression may be much less easy to recognize when pain, anxiety, or hypochondriasis are the primary complaints. In adolescence, depressive feelings are less objective and the physical changes are abnormal but in the opposite direction, ie, hyperphagia or hypersomulence. In elderly patients keep depression in the differential diagnosis of most complaints—even for those usually associated with chronic organic brain syndromes. Depressive illness is common and readily treatable in the geriatric age group.

Initial Assessment

The depressed person requires an approach similar to that taken with traditional medical patients. A good history is the beginning. The history focuses on mood and related dysfunctions but is otherwise a routine examination. Direct questioning regarding suicidal intent is mandatory. A menstrual history, especially to detect pregnancy, and a review of drug allergies is expected.

Substance abuse is highly associated with depression. Not infrequently, alcoholism, in particular, can mask depression with alcohol use as a self treatment, especially to relieve insomnia. Alcohol can be depressogenic and adds to the number of patient problems. Always directly inquire about alcohol and other drug uses. Substance abuse in families can be a tip off to depression since such illness tends to be familial.

Obtain history about all medicines the patient takes. Always include over-the-counter drugs. Table I reviews medications with depressogenic influence. Reserpine, propranolol, alpha-methyldopa, and oral contraceptives are probably the most important examples. Table II enumerates common drug interactions with antidepressants.

Table I. Depressogenic Medications

Antihypersives
- Reserpine (a potent depressogenic influence)
- Propranolol (frequently depressogenic)
- Alpha-methyldopa
- Hydralazine
- Guanethidine
- Clonidine

Miscellaneous Others
- Antipsychotics (neuroleptics)
- Sedatives
- Anxiolytics
- Steroids (includes oral contraceptives)
- Immunosuppressives
- Antituberculous drugs
- Antineoplastic drugs
- Digitalis (less common)
- L-Dopa (less common)

Table II. Drug Interactions with Antidepressants

Side Effect Potentiation
- Alcohol
- Anticholinergics
- Anticoagulants
- Antihypertensives
- Antipsychotics
- Sedatives
- Quinidine-like Drugs
- Sympathomimetics

Antidepressant Effect Potentiation
- Antipsychotics
- Thyroid Hormones

Antidepressant Effect Reduced
- Antipsychotics
- Hepatic Enzyme Inducers, e.g., alcohol and phenobarbital

Antidepressants Reduce Efficacy
- L-Dopa
- Clonidine
- Guanethidine

A thorough physical examination and routine laboratory screening is performed. Hypothyroidism, especially, should be ruled out as a commonly missed cause for depression-like symptoms. Other endocrinopathies, neoplasm, and chronic infections, likewise, can simulate mood disturbance. Illnesses such as anemia may contribute to or at least be partially confused with depression. Each illness requires appropriate therapy. Associated ailments such as alcohol dependence, likewise require attention; a referral to Alcoholics Anonymous, for example, can be beneficial.

Other Considerations

Decide about whether hospitalization is required by assessing the patient's illness severity, responsibility level, suicide potential, and support system from the community and family. Alcohol abuse increases the risk of suicidal acts. In the suicide evaluation consider helpless or hopeless feelings and a preconceived means of killing themselves. Psychiatric consultation is warranted for overtly suicidal cases and in those who behave in a bizarre or psychotic manner. In severe recurrent depressions, consultation may likewise be worthwhile. When encephalopathic signs of a delirium or dementia occur (with confusion, disorientation, and short-term memory gaps, etc.) an appropriate diagnostic workup is indicated; a specific etiological diagnosis and treatment in such presentations is mandatory.

Drug therapy and common sense counselling is advised in moderate to severe depression. Listen to the patient and provide emotional support in brief but frequent appointments. Unproductive life styles, such as overworking, should be discouraged and an active involvement in all aspects of normal life are reinforced. Wherever possible the physician should interrupt, or at least postpone, major life changes such as quitting a job or obtaining a divorce. During depression, judgement is impaired and important life decisions should wait until mood is improved. The patient should remain at work; vacation and leaves of absence are often counterproductive. Without appropriate attention to substance abuses, treatment for depression is frequently unsuccessful.

Acute situational depressions, as associated with events such as loss of spouse or job, are considered normal emotional reactions. These generally require no drug treatment. Counselling and emotional support is the primary intervention. If anxiety is pervasive, a very short-term, tightly controlled prescription for a benzodiazepine might be considered. These safe medicines are unlikely to cause complications, even in an overdose. Benzodiazepines, however, are associated with teratogenisity and should never be prescribed during pregnancy. Persistent benzodiazepine use is generally not recommended and may result in drug dependence.

Geriatrics

In the geriatric population depression is not uncommonly misdiagnosed as dementia, ie, depression

Table III. Prescribing for the Geriatric Patient

1. Perform a meticulous evaluation
2. Select sound treatment indications
3. Diminish polypharmacy
4. Avoid drug interferences
5. Give warnings about side effects, precautions, and what to do if they do occur
6. Treat other conditions
7. Ensure adequate hydration and nutrition, also rest and activity
8. Begin with **lower** dosages
9. Provide a simple drug administration regimen
10. Increase dosage **slowly**
11. Monitor patients closely
12. Anticipate the risk factors to elderly patients, **eg**, cardiac conduction prolongations, urinary stasis, etc.

simulating degenerative brain disease. This can be particularly confusing when the two conditions share symptoms or co-exist. Impaired memory, attention, and concentration can occur in both disorders. Erroneous diagnosis seems to stem partly from the false assumption that all memory impaired older persons are demented; actually, many are depressed. Usually the depressed patient is distressed and complains of poor memory but has little objective, cognitive dysfunction. They exhibit the typical dysfunctions of poor sleep and appetite. On the other hand, demented patients seem less aware of, or disturbed by, their intellectual losses. To design appropriate therapy, each condition requires proper identification.

Physiologic alterations of normal aging include pharmacokinetic changes of antidepressant drug absorption, distribution, metabolism and elimination. Other illnesses, common in older people, may influence these processes. Lower albumin levels may cause more unbound drug availability. Normal age-related changes in liver function may increase blood level concentrations. Reduced blood flow could exaggerate this trend. The net effect of these factors often leads to higher than otherwise expected antidepressant blood levels and greater side effects. Older people are quite sensitive to these medicines and often respond well to low dosage. Because of these factors, older people always require closer observation and a meticulous manner of providing therapy. Table III provides a review of guidelines in prescribing for geriatric patients.

Antidepressant Drugs

The pharmacological treatment of serious depression requires the antidepressant drugs. Benzodiazepines are usually not indicated. In depressed patients with clear psychotic signs, antipsychotic drugs could be useful. Information about prescribing monoamine oxidase inhibitors (MAO-I), lithium, antipsychotic medicines, carbamazepine, or the procedure of electroconvulsive therapy is beyond the scope of this presentation.

A tricyclic configuration charcterizes the traditional antidepressant drugs. Until fairly recently tricyclic antidepressants included: amitriptyline, desipramine, doxepine, imipramine, nortriptyline, and protriptyline. More recently marketed tricyclic antidepressants include: amoxapine and trimipramine.

A tetracyclic and a triazolopyridine derivative antidepressant are now also available. Maprotiline is the tetracyclic antidepressant and trazodone is the triazolopyridine option.

Antidepressant drugs are particularly effective when depression is an uncommon mood but of prolonged duration in patients with the typical depressive dysfunctions, *eg*, early morning awakening. Antidepressants are similar in side effects, drug interactions, and means of administration. The effectiveness and ill effects of the newer varieties remain to be seen; yet there is expectation that "second generation" antidepressants may be safer than the earlier varieties. Maprotiline and trimipramine, though new in this country, have established records of safe use for years elsewhere. Table IV presents all anti-depressants—their primary characteristics, doses and side effects. Drug selection for each individual case is based on such factors, especially the degree of cardiotoxicity, sedation and anticholinergic potential. For example, a sedating antidepressant may be chosen for patients with serious insomnia, a drug of lower cardiotoxicity is appropriate for the "heart patient," a strong anticholinergic choice may be made for the depressed ulcer patient, etc. In geriatrics, one tends to select medicine low in cardiotoxicity and anticholinergic effects.

Antipsychotic drugs are only used in the psychotically depressed or severely agitated depressed cases. Usually such therapy is applied with consultation, particularly since psychotic depression is frequently refractory to the traditional antidepressant treatment. Medicines which contain combinations of amitriptyline and the antipsychotic drug perphenazine (Etrafon® and Triavil®) are an effective antidepressant/antipsychotic

Table IV. Antidepressants

Medications	Anticholinergic Effects	Sedative Effects	Common Daily Dosage Range	Other Characteristics
I. More recently available				
Tetracyclic:				
Maprotiline (Ludiomil)	2+	4+	75-300 mg	Less cardiotoxicity is reported
Triazolopyridine:				
Trazodone (Desyrel)	1+	4+	150-600 mg	Very much lower cardiotoxic effects are reported
Tricyclic:				
Amoxapine (Asendin)	2+	2+	75-300 mg	A rapid onset of action and lower cardiotoxicity are reported
Trimipramine (Surmontil)	4+	4+	75-300 mg	Shorter half-life, less REM-suppression is reported
II. Standard drugs				
Tricyclic:				
Amitriptyline (Elavil, Endep)	5+	5+	75-300 mg	Relatively great cardiotoxicity
Desipramine (Norpramin, Pertofrane)	1+	1+	75-200 mg	Generally has a low side-effect profile
Doxepin (Adapin, Sinequan)	2+	4+	75-300 mg	Least quanethidine inhibition, common in elderly and cardiac patients
Imipramine (Imavate, Janimine, Presamine, Tofranil, SK-Pramine)	4+	3+	75-300 mg	The standard antidepressant, mid-range in side effects
Nortriptyline (Aventyl, Pamelor)	3+	2+	75-100 mg	Lower dosages, correlations to therapeutic blood levels are best understood
Protriptyline (Vivactal)	3+	1+	20-60 mg	Lowest dose form

drug combination; however, such combination therapy reduces dosage flexibility and is a polypharmacy, only utilized when necessary. Amitriptyline is also available combined with the anxieolytic chlordiazepoxide (Limbitrol®). This drug has few indications in long-term therapy but might be appropriate in agitated patients in the early treatment phase. Therapy for depression can generally be accomplished with one drug alone.

The Fetus

Antidepressants are avoided in the pregnant patient. Always confirm the absence of pregnancy in treatment candidates. In the traditional way, these substances are especially contraindicated in the first trimester. However, if depression seriously compromises fetal health and social interventions are not effective, then antidepressants might be applied in accordance with physician judgement, psychiatric consultation, and careful, informed consent procedure. The family and the husband are included in informed consent sessions. Fortunately, tricyclic antidepressants, in particular, have failed to be clearly associated with congenital dysmorphology. Amitriptyline has been used safely in many pregnant women.

Other Risk Factors

Absolute antidepressant contraindications are an acute myocardial infarction and an allergy to a specific drug. Pregnancy, poorly controlled seizures, impaired hepatic function, or conditions where anticholinergic

or quinidine-like effects are not desired may be considered relative contraindications. Heart disease, especially as associated with cardiac conduction prolongations, requires more precautions. Elderly or debilitated persons require greater care. Note that some schizophrenic and manic depressive subjects may become psychotic and/or excitable when antidepressants are prescribed.

Dosages

Protriptyline is the lowest dose antidepressant drug, closely followed in dosage by nortriptyline. Desipramine also is often prescribed in a somewhat attenuated fashion. Trazodone is the highest dose antidepressant. Amitriptyline, amoxapine, doxepine, imipramine, maprotiline, and trimipramine are in the middle dose range, usually between 75 and 300 mg per day. In healthy young people, a dosage below 150 mg in this latter group is frequently ineffective; 150 mg would often serve as the initial therapeutic daily dosage. Pharmacotherapy above 150 mg daily is common and should result in few complications. Dosage is adjusted according to clinical indications and side effects. Dose increases are made at 25 to 50 mg per day, one to three times a week until the person develops side effects, a positive response, or approaches the therapeutic or the upper dosage ranges. In an older or less healthy population, the initial dose is reduced and increases are made more slowly.

In such older patients, especially those with heart diseases, much lower dosages are expected. Whenever cardiac conduction is prolonged, amoxapine, doxepine, maprotiline, or trazodone are commonly recommended. My personal choice in such a case is a maprotiline or trazodone. In such circumstances, therapy might begin with 25 mg maprotiline or 50 mg trazodone, one to three times per day. Cardiac conduction is followed closely. The antidepressant dosage is gradually increased or even decreased according to conduction deficits, drug response, side effects, and blood levels. With the mid-range dose group of drugs, a 75 mg daily administration may be sufficient, and only 25 mg may be adequate in more debilitated cases. Some older persons tolerate more standard dose therapies.

In young people of good health the "all-at-HS," or at least evening-time-only, divided schedule is recommended. In elderly, ill health or cardiac conduction impaired cases, a divided administration is suggested. Divided dosages also applies to patients receiving large doses or where certain side effects such as sedation or hypotension occur. Providing greater amounts of drug in the latter parts of the day frequently is helpful to the insomnia-prone individual.

Unfortunately, antidepressant effects are often not apparent for up to two weeks. If standard therapy is not effective after two weeks and no significant side effects are present, a dosage increase is indicated. Never exceed a positive drug response dose. Poor response to high-dose therapy of a one-month duration would indicate the need to monitor blood levels. A switch to a different medication might become clinically relevant. A second such treatment failure would call for psychiatric consultation. Blood level determinations are becoming a useful guide though their use is not clearly defined for all the drugs. Blood concentrations beyond recommendations, are countertherapeutic. The therapeutic blood levels and dose response of nortriptyline are the most fully understood.

Underdosage is the most usual explanation for inadequate antidepressant response. Some patients on usual doses, however, reveal consistently low blood levels that would necessitate a dosage increase. Blood level monitoring is indicated when the therapeutic response is less than anticipated.

Side Effects

Cardiotoxicity is the most significant antidepressant side effect. Cardiac conduction prolongations are the most prominent problem. Arrhythmias had been cited as the major adverse aspect of these drugs. Rhythm disturbances, however, usually occur only in toxic circumstances and antidepressants actually possess potent quinidine-like antiarrhythmic properties.

Antidepressant-induced cardiac conduction slowing is only recently being fully appreciated. Conduction problems are considered the most significant antidepressant drug side effect. Benign QT prolongations are common; more dangerous alterations of conduction mechanisms as seen in heart block are less frequent but should be closely observed. Assess cardiac conduction when histories indicate heart disease and in all elderly patients.

Expect little overt cardiotoxicity in normal young adults. In all other circumstances electrocardiographic evaluation is obtained prior to initiating therapy. Wherever conduction delays are noted and in high-dose treated patients, pulse checks, close follow up and repeated electrocardiograms are recommended. Rarely one can also document antidepressant induced negative ionotropic effects, especially in predisposed individuals.

Anticholinergic effects are the next most important group of side reactions. These may include a dry mouth, pupillary dilation and an increased heart rate. On rare occasions anticipate inhibition of micuration. This is more likely in males with prostatic enlargement and is usually reversed with bethanechol. No problem is expected in the common chronic, open-angle glaucoma patient. Antidepressants can, however, precipitate acute close-angle glaucoma via their anticholinergic effects, but this is a very rare condition. Nevertheless, intraocular tension monitoring might be suggested in conjunction with these therapies.

Physicians should warn patients about anticholinergic effects. Patients are bothered particularly by dry mouth, constipation and blurred vision. Sexual dysfunction, orthostatic hypotension, sedation, and agitation can also occur. Seizure thresholds are diminished. The physician should educate patients about the lag in antidepressant drug response. Use anticholinergic effects that precede mood elevation for placebo advantage, explaining that these ill effects are evidence that the medicine is beginning to work.

Treatment Duration

Traditionally, antidepressant therapies are applied for several months' duration. An extremely brief illness followed by rapid treatment response may make a shorter course of treatment appropriate. Dosage reductions should be under careful physician observation and dosage tapering done gradually. After a two to four month remission, attempt a 25 to 50 mg dosage reduction each month or so. Individualize drug therapy terminations.

Occasionally antidepressant dosage reduction or discontinuance results in relapse. If this occurs several times, then prolonged therapy may be reasonable. Consultation and continued observation should be made available in all chronic pharmacotherapies. Such patients receive annual liver function monitoring and consideration of other treatment modalities.

Overdose Risk

Antidepressants are dangerous, particulary to the heart in overdose cases. Prolonged cardiac monitoring is indicated following an overdose with these agents. Deleterious effects are exaggerations of the common side effects and can occur with little over one gram at a time: lethality becomes a considerable factor in a two gram or more overdose. Mortality/morbidity risks are greatest at age extremes, in polydrug exposures and to patients with health problems, especially those with cardiac disease. Therefore, antidepressants are applied only in controlled circumstances. This is especially true in suicidal cases. In the acutely depressed patient, even without overt suicidal ideation, do not give prescriptions of greater than one gram quantities. This may be as little as a one-week supply. New prescriptions or refills are carefully monitored. Patients who are suicidal, irresponsible, otherwise ill, or where substance abuse is a problem require even closer physician contact. It is worthwhile to enlist the aid of responsible family members in these circumstances.

References 1. Clinical Depressions: Diagnostic and Therapeutic Challenges. F. Ayd (Editor), Waverly Press, Inc., Baltimore, 1980. 2. Comprehensive Textbook of Psychiatry, Volume III. H. Kaplan, A. Freedman, B. Sadock (Editors). Williams and Wilkins, Baltimore, 1980. 3. Hollister LE: Tricyclic Antidepressants (First of Two Parts). *New Eng J Med* 299:1106-1109, 1978. 4. Hollister LE: Tricyclic Antidepressants (Second of Two Parts). *New Eng J Med* 299:1168-1172, 1978. 5. Manual of Psychiatric Therapeutics. RI Shader (Editor), Little, Brown and Company, Boston, 1976. 6. Stern SL, Rush AJ, Mendels J: Toward a Rational Pharmacotherapy of Depression. *Am J Psychiatry* 137:545-552, 1980. 7. Wright JH, Bell RA, Kuhn CC, et al: Depression in Family Practice Patients. *South Med J* 73:1031-1034, 1980.

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Diagnosis of Depression in Childhood and Adolescence

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While child psychiatrists have begun to acknowledge the prevalence of depression among children and adolescents, this entity is underdiagnosed among children presenting to primary care for depressive symptoms such as somatic complaints, lethargy, or behavior disturbances. The current diagnostic criteria for depression are presented and discussed with reference to children, with suggestions to facilitate readier diagnosis and hence treatment of children who are depressed.

In recent years the diagnosis of major depression in children and adolescents has become increasingly accepted among child psychiatrists. However, children will almost never be brought to a pediatrician or family practitioner with a chief complaint of excessive sadness or boredom. Rather, depressed children will present early psychosomatic complaints, lethargy, or behavioral disturbances—and later, with suicide attempts or gestures. A recent prevalence study found that two of 103 children (1.9% from a randomly selected population met the DSM-III criteria for Major Depression (see Table I).[1] Studies of various clinical populations, with varying diagnostic criteria, have reported depression in 0.8 to 58% of children studied.[2] In this paper we describe the currently accepted diagnostic criteria for depression in children and adolescents, with suggestions to the primary caregiver in regard to assessing these symptoms more astutely.

Diagnostic Criteria[3]

Depressed Affect

Look at the child! Sadness, the *sin qua non* of depression, is almost invariably expressed in the subject's facial expression. Does he/she look unhappy? Or does the child have a bland, frozen look of affect suppression? Are smiles, if they appear, only fleeting? The dysphoria of depression must be distinguished from the normal anxiety of meeting a strange examiner—which will decrease with acquaintance or with a parent's presence. You may ask, "Do you feel sad?" (Or blue, down in the dumps, etc.) Open verbal admissions of depressed effect are more common in older children.

Diurnal Variation

The depressed child feels worse in the morning, and as the afternoon and evening approach their depression lifts. Asking "What time of day is the worst?" will uncover a daily mood variation in these patients.

Anhedonia

A useful question is, "When's the last time you really had fun?" Normal children enjoy themselves frequently. Or ask, "When you feel bad, what do you do to make yourself feel better?" A severely depressed child will have no answer. However, severely apathetic children may mask the fact that they do not "have fun." They may say they enjoy activities which, on questioning, they rarely perform; or they may complain of being "bored."

Morbid Ideation, Suicidal Ideation, or Suicide Attempts

Morbid thoughts and suicidal thoughts should be questioned for separately. The former may relate to the death of a grandparent or pet. A gentle way to approach the topic of suicide is to first ask, "Do you worry about . . . (relatives, friends, a pet) getting hurt?" Then, "Do you ever worry about yourself getting hurt?" Finally, "Do you ever think about hurting yourself?" Questions about suicide rarely upset a child, and are very important since suicide is the third leading cause of deaths in adolescents, with 80% of adolescent suicide attempts being made by depressed adolescents. Furthermore, while prepubertal children are much less likely to attempt suicide than are adolescents, those who do so usually plan their acts in advance, so it is necessary to check for this with every depressed child. Suicide risk is assessed in children in a similar manner as in adults, with investigation of previous attempts or gestures, depression or suicide in the family, extent of planning for suicide, and so on.

Lowered Self-Esteem

It is difficult to determine whether children have a low opinion of themselves at ages below six to nine, before they have formed the abstract idea of a "self concept." Instead, they think of themselves in concrete terms—as ugly or stupid, or they admit that their peers do not like them and call them by derogatory nicknames. Ask, "If you could change something about yourself, what would you change?" Younger depressives will focus on concrete attributes such as appearance; older children with low self-esteem may deplore more abstract faults such as lack of intelligence or of "personality." Self-esteem is a very sensitive issue. Some children and adolescents brag how great they are, but this facade is unconvincing to observers and to the children themselves.

Pathological Guilt

As with low self-esteem, this symptom may not be confessed so readily, despite its power. Instead, it may be noticed by a sensitive parent, or demonstrated in punishment-seeking behavior or destruction of cherished possessions. Ask, "Did anything bad happen because you were naughty, or because you disobeyed Mom or Dad?" Children who become depressed after a loss, such as divorce or death of a parent, often believe that the event was their fault.

Social Withdrawal

Ask the parent(s) about the child's play habits, and whether there has been a change in the extent to which the child reaches out to others. Depressed children who avoid social occasions usually interacted satisfactorily with peers before their illness. With depression, they often set themselves up to be rejected. They may come to depend excessively on a pet or imaginary companion for a friend. Very severely depressed children no longer care for peers or friends.

Impairment of School Work

This symptom typically occurs as a marked deterioration from a previous level, based on lack of interest and difficulty concentrating. Ask about specific grades before and after the onset of sadness. Performance varies with mood and with attitude to specific teachers. A few depressed teenagers may compulsively do well without enjoyment. These teenagers shock the community most should they attempt suicide.

Psychomotor Retardation

Hypoactivity and decreased postural tone often occur as in the adult depressive syndrome. Ask "What do you do after school?" If the child has started to stay in the house watching TV, or retreats to her/his room rather than play actively outside, consider a mood disturbance. Persistent monosyllabic answers to questions may indicate depression if the child is not simply oppositional or from a distinctly different culture. Sometimes agitation states may occur.

Complaints of Fatigue

It is unusual for a healthy child to become "tired" during the day, to voluntarily take afternoon or evening naps, or to be too fatigued to join with peers in active recreation. Such complaints are common in depressed children. Hypersomnia may well indicate depression, especially if the child is still fatigued after oversleeping every day for weeks.

Difficulty with Sleep and Appetite

Difficulty going to sleep, common in childhood depression, tends to be related to anxiety. In prepubertal children especially, it is more common than middle or terminal insomnia. Children tend to be more aware of their sleep difficulties than their parents. Asking the chld if they awake before their alarm goes off will yield valuable information about early morning awakening, a symptom common in depression. Since not eating often incurs parental disapproval, depressed children tend to hide their lack of appetite, and significant weight loss may go unnoticed in a child. Be alert to a child's place on his/her growth chart curve—is he/she continuing on the same percentile? Note that some children overeat and gain weight more rapidly than normal when depressed.

Somatic Complaints and Other Associated Symptoms

The family practitioner or pediatrician who sees the children brought in for recurrent stomachaches, headaches, and the like, is in a key position to assess the possibility of depression. Ling, *et al*, diagnosed depression in 40% of 25 children who presented with headaches.[5] Unlike adults with masked depression, depressed children with somatic complaints usually will verbalize their dysphoric feelings, if asked.

Other symptoms associated with depression in children include irritability, which may be the first concern

of parents or teachers. Such outside observers are the most reliable source of information on this symptom.

Differential Diagnosis

Adjustment Disorder with Depressed Mood is an overused diagnosis, attached by clinicians who wish to imply a less serious condition. However, when depression can be diagnosed on its own merits, removal of a psychosocial stressor may not in itself bring relief, as would be the case in the adjustment disorder category. To diagnose an adjustment disorder, a very clear psychosocial stressor must be identified, to which the symptoms may be attributed.

Grief reactions may become depressive episodes if prolonged and severe. A good rule of thumb is that if symptoms persist for more than 12 weeks following the initial loss, something more than a simple grief reaction is taking place.

Separation anxiety symptoms are clearly relieved by the presence of a parent (usually the mother).

Learning disorders may lead to a degree of depression when the child does poorly in school. However, learning disorders are distinguished by the fact that the child usually has done poorly from the start. Psychoeducational testing may help confirm the degree of impairment. The question of "which came first" is partly academic, since improvement of mood in a depressed child will generally lead to improved performance, even if the depression is secondary to a learning disability.

Psychosis with Depressive Affect represents a difficult diagnostic category best left to a child psychiatrist. Causes could include a reaction to severe stress, drug intoxication, childhood schizophrenia, psychotic depression with mood-congruent thought disturbances, and early manic-depressive illness.

Physical Illness with Dysphoric Mood generally presents a different "flavor" of apathy and fatigue than that of primary depressive illness. While parents and clinicians may deny how severely depressed children with known life-threatening illnesses may become, they may be anxious for a psychiatric diagnosis in cases where an occult medical disease is actually present. In either case depression may be diagnosed or ruled out on the basis of criteria relevant to depression *per se*.

Attention Deficit Disorder, or Hyperactivity, may be difficult to distinguish from a depression with agitation. However, in the latter, hyperactivity is related more to fluctuations in anxiety than to inability to attend.

TABLE 1[4]

Diagnostic criteria for major depressive episode

A. Dysphoric mood or loss of interest or pleasure in all or almost all usual activities and pastimes. The dysphoric mood is characterized by symptoms such as the following: depressed, sad, blue, hopeless, low, down in the dumps, irritable. The mood disturbance must be prominent and relatively persistent, but not necessarily the most dominant symptom, and does not include momentary shifts from one dysphoric mood to another dysphoric mood, e.g., anxiety to depression to anger, such as are seen in states of acute psychotic turmoil. (For children under six, dysphoric mood may have to be inferred from a persistently sad facial expression.)

B. At least four of the following symptoms have been present nearly every day for a period of at least two weeks (in children under six, at least three of the first four):
 1. poor appetite or significant weight loss (when not dieting) or increased appetite or significant weight gain (in children under six, consider failure to make expected weight gains)
 2. insomnia or hypersomnia
 3. psychomotor agitation or retardation (but not merely subjective feelings of restlessness or being slowed down) (in children under six, hypoactivity)
 4. loss of interest or pleasure in usual activities, or decrease in sexual drive not limited to a period when delusional or hallucinating (in children under six, signs of apathy)
 5. loss of energy; fatigue
 6. feelings of worthlessness, self-reproach, or excessive or inappropriate guilt (either may be delusional)
 7. complaints or evidence of diminished ability to think or concentrate, such as slowed thinking, or indecisiveness not associated with marked loosening of associations or incoherence
 8. recurrent thoughts of death, suicidal ideation, wishes to be dead, or suicide attempt

 Neither of the following dominate the clinical picture when an affective syndrome is absent (i.e., symptoms in criteria A and B above):
 1. preoccupation with a mood-incongruent delusion or hallucination
 2. bizarre behavior

 Not superimposed on either Schizophrenia, Schizophreniform Disorder, or a Paranoid Disorder.

 Not due to any Organic Mental Disorder or Uncomplicated Bereavement.

Discussion

Depression, the most common psychiatric illness acknowledged in adults, is currently underdiagnosed in children and adolescents, even though many depressed children do present to practitioners for work-up of their somatic complaints or in the course of health maintenance visits. Depression is not always "just a

phase." A depressive episode if left untreated, can worsen or continue indefinitely, risking these complications: interference with normal psychological, social, and educational development; obesity or malnutrition; and suicide attempts. Practitioners routinely seeing children are encouraged to have a high index of suspicion for depressive illness; to consider it in the differential diagnosis of unexplained weight changes and vague somatic complaints; and to urge adequate diagnostic work-up and intervention. An awareness of the established criteria for diagnosis of depression will facilitate identification of cases of depression in children and adolescents who could benefit from treatment.

Acknowledgements

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References 1. Kashani J and Simonds JF: "The Incidence of Depression in Children." *Am J Psychiatry*, 136:1203-1205, 1979. 2. Kashani J: "Epidemiology of Childhood Depression." *Psychiatry 1982: The American Psychiatric Association Annual Review.* Grinspoon, Lester, ed. Washington: American Psychiatric Press, Inc. pp. 281-288, 1982. 3. Poznanski Elva Orlow: "The Clinical Characteristics of Childhood Depression." *Psychiatry 1982: The American Psychiatric Association Annual Review.* Grinspoon, Lester, ed. Washington: American Psychiatric Press, Inc., pp. 296-307, 1982. 4. *Diagnostic and Statistical Manual of Mental Disorders*, 3rd edition. Washington, D.C., American Psychiatric Association. pp. 213-214, 1980. 5. Ling W, Oftedal G, and Weinberg W: "Depressive Illness in Childhood Presenting as Severe Headache." *Am J Dis Child*, 120:122-124, 1970.

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Clinical Application of the Dexamethasone Suppression Test in Major Depressive Illness

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The dexamethasone suppression test can be useful in both the diagnosis and assessment of treatment response in major depressive disorders. A case report of a 51-year-old female inpatient is presented to illustrate its clinical utility.

Depression has been associated with diseases of the adrenal gland such as Cushing's and Addison's diseases. Adrenocortical activity is regulated by the hypothalamus via the anterior pituitary. It has recently been established that the limbic system, the so-called seat of emotions, acts together with the hypothalamus in controlling pituitary-adrenocortical function. An abnormal limbic system drive on the hypothalamic-pituitary-adrenal axis could explain the disturbance of neuroendocrine regulation found in many patients with major depression.[1] This disturbance is clinically measured by means of the dexamethasone suppression test.

The dexamethasone suppression test (DST) has proven to be a useful tool for the physician in both the diagnosis and treatment of a significant proportion of patients with major depressive disorders. The DST itself evaluates the responsiveness of the hypothalamic-pituitary-adrenal (HPA) axis to exogenously given steroid. After a 1 mg oral dose of dexamethasone at 11:00 p.m., a patient's serum cortisol levels normally decrease to less than 5 ug/dl at 4:00 p.m. and 11:00 p.m. the following day.[2] Sixty-seven percent of depressed patients fail to depress cortisol levels with the DST, indicating dysfunction of the HPA axis.[3] These HPA abnormalities usually correct after successful treatment, either with tricyclic antidepressants,[4,5,6,7] or with electroconvulsive therapy (ECT).[6,8,9,10,11,12]

The proper utilization of the DST requires that certain medications and medical conditions be ruled out prior to testing. Drugs causing false positive test results include: phenytoin (Dilantin®), barbiturates, meprobamate (Equanil®, Miltown®), and high dose estrogens (but not oral contraceptives or low dose menopausal replacement estrogens). Medical conditions giving false positives include major physical illness, trauma, fever, nausea and vomiting, dehydration, temporal lobe disease, Cushing's disease, unstable diabetes mellitus (acidosis or hypoglycemica), malnutrition, anorexia nervosa, acute alcohol withdrawal and pregnancy. False negative results may be secondary to hypopituitarism, Addison's disease, synthetic steroid therapy, high dose benzodiazepines (25 mg/day of diazepam [Valium®] or its equivalent), and cyproheptadine (Periactin®).[3]

Case Report

A 51-year-old Caucasion woman was admitted to the University of Kentucky Medical Center Psychiatric Unit for depression characterized by marked indecision of 12 months' duration. Other symptoms included insomnia, anorexia with a 35-pound weight loss, feelings of guilt obsessions, worthlessness and hopelessness, psychomotor retardation, difficulty concentrating, decreased libido, anhedonia and anergia. As an outpatient, she had received desipramine (Norpramin®) at a dosage of 150 mg/day for four months with one documented therapeutic blood level and doxepin (Sinequan®) at a dosage of 200 mg/day for five months, with minimal success. She had been hospitalized at the University of Kentucky Medical Center months previously for one month and treated with amoxapine (Asendin®) at a dosage of 125 mg/day for 22 days. During this hospitalization, weight gain and sleep improvement occurred, but upon discharge her indecision prevented her from keeping outpatient appointments, taking medications, and performing household duties such as shopping.

Her only prior psychiatric admission occurred 20 years previously for a postpartum depression responding to electroconvulsive therapy.

On admission she presented as a cachectic patient requiring at least 30 seconds to begin to respond to all questions. There was no evidence of thought disorder. Her weight upon admission was 85 pounds and her Hamilton Depression Rating Scale (HDRS) was 27. (The HDRS is a rater administered measurement of 22 symptoms and signs of depression: a decrease of 60% or more in the HDRS is consistent with a response to treatment.) She was unable to select a daily hospital menu in two hours. On day one, 1 mg dexamethasone was given orally at 11:00 p.m. On day two, postdexamethasone cortisols were obtained of 14.3 ug/dl at 4:00 p.m. and 18.4 ug/dl (normal = < 5 ug/dl) at 11:00 p.m. On day three, imipramine (Tofranil) was begun and gradually increased to the dosage of 150 mg hs by day 10. By day 13, her weight was 91 pounds, at which point it stablized. On day 15, her combined imipramine and desipramine (desipramine is an active metabolite of imipramine) blood level was 149 ng/ml with therapeutic level being 70-300 ng/ml. Due to lack of clinical response, her imipramine was increased to 200 mg hs (on day 22) and eventually 250 mg hs (on day 36) with subsequent imipramine and desipramine levels of 186 ng/ml on day 26 and 345 ng/ml on day 41. She was thereafter tapered off imipramine. On day 42, a second DST was performed, yielding a 4:00 p.m. and 11:00 p.m. post-dexamethasone cortisol of 8.1 ug/dl and 7.5 ug/dl, respectively. At this time, her psychomotor retardation and indecision were unchanged.

Due to treatment failures with two differing chemical classes of tricyclic antidepressants plus her dramatic response to ECT 20 years prior, ECT was initiated. Six courses of unilaterally administered ECT were performed between day 50 and day 62. After her second treatment, her weight had increased to 100 pounds, and an assertive individual emerged whom her spouse described as "100% better." After her fourth treatment, a DST was repeated with the following normal values obtained: 4:00 p.m. and 11:00 p.m. postdexamethasone cortisols of less than 2 ug/dl. The patient was discharged after her sixth ECT treatment, weighing 114 pounds and with a HDRS of 4, a decrease of 85% from her admit score.

In this patient, a number of clinical markers were used to follow her course. Antidepressant blood levels were obtained to insure that an adequate dosage was given before determining the patient to be a nonresponder to a tricyclic antidepressant. A depression rating scale was administered at the onset and end of the hospitalization. Her weight and general behavior were assessed, and finally, serial DST's were performed, with the last DST showing normalization of the patient's HPA axis.

A number of recent publications have demonstrated that the DST normalizes after successful electroconvulsive therapy,[6,8,9,10,11,12] as it did in our patient, thus providing a truly objective marker of clinical response. A continuation of an abnormal DST during her course of therapy would have suggested the need for further treatments.[13]

For the primary care practitioner who does not administer electroconvulsive therapy, the DST may be useful in determining when to discontinue oral antidepressant therapy. Endogenously depressed patients with initially abnormal DST's may be free of symptoms and signs of depression before the DST converts to normal. However, if their medication is stopped before their DST normalizes, they run a high risk of relapsing.[4,5,6,7,13] Thus, failure of DST normalization in depression is prognostically ominous.

A final practical application of the DST is its utility in diagnosing major depression in certain patients who present with confusing or mixed clinical pictures. The DST may discriminate major depression from depressive neuroses.[14] The DST may differentiate a severely depressed patient presenting with catatonia from a catatonic schizophrenic,[15] thus allowing the proper treatment to be instituted. In some illnesses, which present with an array of neurotic or reactive features, symptoms of depression may be difficult to interpret in light of the existing problem. An abnormal DST could suggest a major depression superimposed upon the underlying illness and the need for antidepressant therapy.[14]

Thus, the DST can be valuable to the primary care practitioner. It provides a biological marker for assisting in the diagnosis of a major depressive disorder with a sensitivity of 67%. Ninety-six percent of normal patients will have a normal response to the DST, giving it a specificity of 96%. In outpatients, the 11:00 p.m. cortisol can be eliminated with no significant difference in sensitivity.[3] The test may be useful in patients presenting with complicated or confusing symptomatology, and if the baseline DST is abnormal, repeat DST's, once normal, can provide guidance as to when to stop treatment and minimize the chance of relapse. The

correct use of the test requires screening patients with certain medical conditions or those taking particular medications that may affect the test.

References 1. Carroll BJ, *et al:* Neuroendocrine regulation in depression I. Limbic system—adrenocortical dysfunction. *Arch Gen Psychiatry* 33:1039-1044, 1976. 2. Carroll BJ: The dexamethasone test for melancholia. *Br J Psychiatry* 140:292-304, 1982. 3. Carroll BJ, *et al:* A specific laboratory test for the diagnosis of melancholia. *Arch Gen Psychiatry* 38:15-22, 1981. 4. Goldberg IK: Dexamethasone suppression test as indicator of safe withdrawal of antidepressant therapy. *Lancet* 1:376, 1980. 5. Goldberg IK: Dexamethasone suppression tests in depression and response to treatment. *Lancet* 2:92, 1980. 6. Greden JF, *et al:* Normalization of dexamethasone suppression test: A laboratory index of recovery from endogenous depression. *Biol Psychiatry* 15:449-458, 1980. 7. Brown WA, *et al:* The 24 hour dexamethasone suppression test in a clinical setting: Relationship to diagnosis, symptoms, and response to treatment. *Am J Psychiatry* 136:543-547, 1979. 8. Dysken MW, *et al:* Serial postdexamethasone cortisol levels in a patient undergoing ECT. *AM J Psychiatry* 136:1328-1329, 1979. 9. Albala AA, *et al:* Changes in serial dexamethasone suppression tests among unipolar depressives receiving electroconvulsive treatment. *Biol Psychiatry* 16:551-560, 1981. 10. Papakostas Y, *et al:* Neuroendocrine measures in psychiatric patients: Course and outcome with ECT. *Psychiatry Res* 4:55-64, 1981. 11. Albala AA, and Greden JF: Serial dexamethasone suppression tests in affective disorders. *Am J Psychiatry* 137:383, 1980. 12. Gold MS, *et al:* Dexamethasone suppression tests in depression and response to treatment. *Lancet* 1:1190, 1980. 13. Kalin NH, *et al:* Use of the dexamethasone suppression test in clinical psychiatry. *J Clin Psychopharmacol* 1:64-69, 1981. 14. Carroll BJ, Curtis GC, and Mendels J: Neuroendocrine regulation in depression II. Discrimination of depressed from nondepressed patients. *Arch Gen Psychiatry* 33:1051-1058, 1976. 15. Greden JF, and Carroll BJ: The dexamethasone suppression test as a diagnostic aid in catatonia. *Am J Psychiatry* 136:1199-1200, 1979.

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Recognizing Potential Suicide

LEAH J. DICKSTEIN, M.D.

Evaluating the suicidal potential of students should and can be the assumed responsibility of all those professionals who work in the health field. A constructive professional attitude, as well as progressive steps to be followed in an interview are outlined. Observing nonverbal cues through body language and by what is not said followed by a careful personal, medical, social and family history are the necessary broad areas to be included in information gathering. Finally, narrowing the focus of discussion to possible depressed mood and suicidal potential can help the professional make a true evaluation. Furthermore, if the professional is respectful, empathic and unhurried, most students will reveal their innermost feelings including hopelessness, helplessness, anger and suicidal wishes and plans. Often this interview can be a life saving intervention as well as a therapeutic experience.

Suicide is a health problem; as cause of death among college-aged people, suicide ranks second to accidents. Attempted suicide, about eight times as common as death by suicide, is also a health problem. Those who work with student health must treat seriously threats of suicide not only because the patient may try and fail, not ending life but disrupting it temporarily or permanently. Most people who attempt suicide, whether or not they succeed, have visited a doctor or clinic within weeks before, almost certainly looking for help but not necessarily requesting it. Usually their complaint is not suicidal impulses, and they do not usually consult psychiatrists. All people who work with student health should be able to spot and evaluate a suicide risk.

Those who wish to recognize potential suicides must first dismiss from their minds any picture of the most likely suicide. Statistically, the most common suicide is an older, single-widowed-divorced man, Caucasian and Protestant, unemployed, in poor physical health, a man who lives alone and has suffered a change in life situation.[1] But many people uncooperative with statistics wish to die, so many that the traditional statistics are changing. The distinctions between genders and races are not as clear as they used to be; neither are neat correspondences with religions.[2] The increase in number and rate of adolescent suicide is under debate;[3] what is clear so far is that adolescents are still, as always, at risk. Suicide statistics have notoriously dubious value, and statistics can reveal interesting features of groups only, so a preconceived idea of the typical suicide may blind one to the individual case.

The second step in recognizing potential suicides is to cultivate an attitude that permits the patient to speak freely. Many people find those who threaten suicide frightening—because the idea is either too foreign or too close to home, because they fear being dragged into a messy problem by a manipulative person. Some comfort themselves by assuming that someone else will surely help out; others comfort themselves by concentrating on free will—the right to die. For some, lack of time prevents participation. One can be too concerned as well as too little concerned; viewing suicide as first of all a health problem permits one to attend to the patient's problem rather than one's own.

People need not avoid dealing with potential suicides because they lack specialized knowledge. An interview to assess suicidal risk has several features of ordinary health interviews and some peculiar to the situation. One watches and asks and, above all, listens.

Obviously, patients who volunteer "I am suicidal" must be counted as suicide risks, though such frankness may mislead a too-clever listener into assuming that, paradoxically, there is no risk. A patient who appears controlled and rational may seem interested in life, but that very control and rationality may make carrying out suicide plans easier. An appearance of mental health may mislead: though people who kill themselves are probably universally unhappy, they are not necessarily mentally ill.[4] Those who never think of suicide at all never kill themselves; those who straightforwardly ac-

knowledge interest in suicide should be assumed to speak literal truth. Even a plainly manipulative person requires attention; the listener who ignores a spoken threat may indeed escape manipulation, but the manipulator may manipulate him/herself to death.

Those who declare their interest in suicide merit attention; so, let me hasten to add, do those who volunteer nothing and who give information unwillingly when invited. Nonverbal clues that recommend probing include simply looking depressed or dejected, exhausted or withdrawn. Slumping posture, careless grooming, avoiding eye contact—these too are clues. Though not all suicides have been depressed, depression is a common cause of suicide, and these signs of depression often help identify potential suicides. Occasionally a person still indecisive about suicide may be unusually agitated; in contrast, a person relieved at finally having decided to die may be extremely calm.

How the patient looks is only a clue; a well-handled conversation makes it easy for a suicidal person to talk freely about his/her plans. One may legitimately question any patient who sounds, looks, or acts depressed. The goal is a frank conversation with the patient talking most of the time, but beginning too frankly may frighten the patient into silence. One must work crabwise, starting with ordinary topics.

Again, the interviewer's attitude makes a difference. He/she must pay attention to the patient, and his/her concern must be apparent without stifling the conversation. A matter-of-fact, objective, respectful tone works best. Silence can help, an encouraging, not a judgmental silence. Silence can give the patient time to collect the courage to speak or just to think of answers to questions. Depressed people, for example, simply cannot think or talk as fast as usual; they need time. Genuine, detached concern is the key, and one initiates the specific, pointed discussion of suicide gradually, starting with non-threatening topics.

General medical history, social and work history, family background—these ordinary topics make good openers. Family history, including early family losses and any suicides in the last three generations, alcohol use, illness, divorce or separation, and transient lifestyle can suggest causes of current problems. The tenor of recent events and the support systems available to the patient can distinguish an emergency from a milder case. Like failures, successes—new jobs, marriages—can disturb people by disrupting familiar patterns. Sometimes a sense of eternal sameness disturbs a patient. One needs to check for obvious misfortune, but misfortune need not precede suicide. Asking for conspicuously ordinary information relaxes people, and such questions invite the patient to offer a general picture of his/her life. This picture gives the best guide to the patient's state of mind, and any of these areas may be the very one bothering a suicidal person and may spark a confession of unhappiness.

Mixing formalities and interpretations with the more pertinent questions sets a respectful tone and gives one time to look at the patient, time to notice unusually slow movements and speech, to watch for visible signs of despair. I even ask what the patient wishes to be called (and then call him/her by name often) and request permission to ask questions. Usually the interviewer must think of all the topics of conversation, and the interview flows from topic to topic conversationally, not as if one is filling out a checklist. One must temporarily discard extremely disturbing topics, then return to them later from another direction. In this way, the conversation encourages trust and openness rather than forcing answers from the patient. Asking about early family life rather than the present situation only, for example, may make it easier for the patient to discuss family conflicts.

These topics lead the conversation to how the patient feels. Often one must ask directly about anxiety and depression, about feeling a disappointment to others. The questions follow logically from the circumstances: one offers a name for the feeling and sees how the patient accepts it. Direct questions about thoughts of suicide are not as likely to give the patient ideas as to indicate that one is objective enough to discuss the matter without judging. One must encourage any information about intention—when the suicide is scheduled, the method to be used, any preliminary steps like buying a gun or other weapon, cleaning up affairs, giving away favorite possessions, and practicing for the event in dry run. Thoughts about the future also indicate intention: a person who can envision no acceptable future is in greater danger than one who wishes merely to rearrange his/her life but cannot figure out how. People who imagine only unacceptable futures may be able to describe them, listing many of their conflicts quite efficiently. With luck, the patient will say exactly how suicidal he/she is; people will answer honestly almost any well-presented question.

If, however, a patient should refuse to discuss the suicide plan, certain features suggest more likelihood

of suicide than others. A person who shows poor judgment, particularly if it results from alcohol or drug use (especially hallucinogens), is at risk, as is, for the same reason, a person suffering from alcoholism, organic brain syndrome, schizophrenia, or personality disorder. A person whose history shows previous emotional problems, previous hospitalizations for suicidal intent, or a previous attempt is at greater risk. Recently losing a job or enduring another blow to self-esteem also suggest greater risk. Those who deny problems or refuse to talk may have firmly chosen a future which does not include the possibility of getting help. Once I hospitalized a suicidal patient who refused to discuss her suicide method and discharged her several days later when she admitted that her plan had been to jump off a particular bridge. She agreed that I was right to hospitalize her, that she would have carried out her plan.

Before ending the interview, one should ask if the patient wishes to say anything further; then one should speak to any accompanying friends and relatives for another evaluation of the danger. On a hopeful note, an interview to assess suicidal potential need not do only that. Often this conversation can defuse the situation, start the patient thinking of alternatives to suicide. Suicidal intentions do not necessarily last; sometimes they last a few hours only, but these few hours are critical. All potentially suicidal patients require follow-up care, but many do not require hospitalization. Suicidal people will be honest if the interviewer permits it, and though they are helpless at the moment, they respond well.

While this is not the place to discuss in detail the treatment of suicidal people, several issues are extremely important. In kindness, when referring a patient to someone else for treatment, one should invite him/her to call back, which prevents further feelings of rejection. Giving an emergency telephone number, not necessarily one's own, can similarly give a patient another alternative to suicide. Whenever there is any risk at all of suicide, one should dispense medications with caution: the least dangerous drugs available and few doses at a time.

Summary

I. Watch for nonverbal signs that a patient may be suicidal:
 1. looks depressed or withdrawn
 2. avoids eye contact
 3. acts extremely calm or extremely agitated

II. Ask about suicidal intentions:
 1. Ask general, non-threatening questions first.
 2. Lead up to frank discussion of suicide.

III. Evaluate danger:
 1. What kind of future does the patient envision?
 2. Has the patient chosen a method or a deadline for suicide?
 3. Is the patient alone, without support systems?
 4. Is the patient's judgment damaged by alcohol or drugs?

IV. Remember:
 1. Almost everyone answers an understanding interviewer's objective questions.
 2. Suicidal people need help and encouragement to talk, but they also need time.

References 1. Dubin WR, Stolbert R: Emergency Psychiatry For The House Officer. New York, SP Medical and Scientific Books, 1981, p. 67. 2. Shneidman ES: Suicide Thoughts And Reflections, 1960-1980. New York, Human Sciences Press, 1981, pp. 24-25. 3. Holinger PC, Offer D, Prediction of adolescent suicide: a population model. *Am J Psychiatry* 1982 March; 139(3):302-7. 4. Neuringer C, Lettieri DJ: Suicidal Women. New York, Gardner Press, 1982, p.5.

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Acquired Immune Deficiency Syndrome in Kentucky

JAMES M. FELSER, M. D. AND MARTIN J. RAFF, M. D.

The first case of acquired immune deficiency syndrome (AIDS) diagnosed in the state of Kentucky is reported. A 27-year-old homosexual man with prior evidence of infections with hepatitis B, syphilis, and gonorrhea presented with oral and esophageal candidiasis, cryptococcemia, giardiasis, and serologic evidence of active CMV infection. Immunologic testing indicated a cellular immune defect in which a deficiency of helper and overabundance of suppressor T-lymphocytes appeared to enchance susceptibility to a variety of opportunistic pathogens. He is currently at risk of developing Kaposi's sarcoma and infection with Pneumocystis carinii. *The recent outbreak of opportunistic infections and Kaposi's sarcoma in defined patient populations is now a major public health problem. Physicians should be aware of its presence, and to the potential risk associated with exposure to such patients' blood products.*

Since June 1981, the Centers for Disease Control (CDC) has reported outbreaks of opportunistic infections occuring in patients who have had no prior underlying disease.[1,2] In December 1981, Gottlieb *et al*[3] described five "normal" homosexual males who developed *Pneumocystis carinii* pneumonia. Other male homosexuals, Haitian immigrants, drug addicts, hemophiliacs, and more recently, infants and young children have been presenting with a similar syndrome, consisting of multiple opportunistic infections due to organisms not usually pathogenic for normal individuals.[4] These patients have displayed deficiencies in cellular immune function, often terminating in Kaposi's sarcoma. This disease complex is termed "acquired immune deficiency syndrome (AIDS)." The CDC now considers this an epidemic in several high risk populations.[5]

A previously healthy homosexual male admitted to University of Louisiville Hospital is the first case of AIDS seen in Kentucky. The case report is followed by a review of the literature and discussion of this syndrome.

Case Report

A 27-year-old homosexual black male with six weeks of generalized weakness, fever, painful oral lesions, and a 20-pound weight loss was admitted to hospital in August 1982. Four weeks previously oral candidiasis was diagnosed and nystatin prescribed. At the time of admission, he complained of burning epigastric discomfort unrelieved by antacids, and difficulty swallowing solid food. Review of systems revealed no other significant symptoms. He had treated for primary syphilis and gonococcal urethritis during the year prior to admission. There had been no recent travel or use of intravenous drugs, he was not of Haitian descent, and his sexual contacts had not noted recent illnesses.

He was a 50 kilogram, chronically ill-appearing man with temperature 103.2°F, BP 130/70 mm Hg, pulse 96 and respirations 20/min. There was a thick white coating involving the uvula, soft palate, tonsillar pillars, and oropharynx, without lymphadenopathy. The neck was supple and lungs clear. A soft early systolic murmur was audible and the remainder of the examination unremarkable.

Hemoglobin was 7.2 gm/dl, hematocrit 21%, platelets 236,000 and white blood cell (WBC) count 3,700/mm^3, with 58% neutrophils, 38% lymphocytes, 3% monocytes, and 1% eosinophils. Creatinine was 1.7 and BUN 27 mg/dl, with normal electrolytes. There was 2+ proteinuria. Serum immunoglobulins were normal.

Chest x-ray was clear: barium swallow demonstrated a "moth-eaten" esophagus with multiple ulcerations consistent with esophageal candidiasis (Figure 1). Culture of oral lesions grew Candida albicans. One acellular urine specimen and nine sets of blood cultures obtained during the first three days of hospitalization

TABLE 1

Lyphocyte Transformation Studies in a Patient With AIDS

Mitogen	Dilution	Mitogen Stimulation Index	Normal Range
Phytohemagglutinin	1:40	4	> 20
Phytohemagglutinin	1:80	2	> 20
Pokeweed mitogen	1:10	13	> 10
Pokeweek mitogen	1:20	3	> 10
Concanavalin A	1:15	1	10-15
Concanavalin A	1:20	3	10-15

all grew Cryptococcus neoformans; infectious diseases consultation was obtained.

Therapy was initiated with oral ketoconazole and intravenous amphotericin B. When blood cultures grew C. neoformans, 5-fluorocytosine was substituted for ketoconazole. Pretreatment titers of cryptococcal antigen were 1:1024 in serum and 1:2 in cerebrospinal fluid, which was otherwise normal (protein 21 gm/dl, glucose 51 mg/dl, without leukocytes). There was serologic evidence of previous infection with Hepatitis B and syphilis, and cysts of Giardia lamblia were found in stools. Cytomegalovirus (CMV) titer on admission was 1:128 (IgG); three months later this had increased to 1:1024. Cultures of throat, buffy coat, and urine were negative for CMV. Skin test anergy (PPD, mumps, and candida antigens) was present and the results of special immunologic studies are summarized in Tables 1 and 2.

The patient received six weeks of 5-fluorocytosine and 2 grams of amphotericin B. Three months after starting therapy the serum cryptococcal antigen titer had decreased to 1:2 and the CSF titer had reverted to negative. Infection with G. lamblia was successfully treated with metronidazole. During this period, there has been no evidence of recurrent fungal infection, but he has rehospitalized for gram-negative bacillary sepsis.

The presence of several opportunistic infections in a male homosexual patient suggested a diagnosis of AIDS. Contact with the CDC indicated that this was the first case reported from Kentucky (Drotman DP; CDC, Personal communication. October 1982).

Discussion

The CDC defines AIDS as a "disease, at least moderately predictive of a defect in cell-mediated immunity, occurring in a person with no known cause for diminished resistance to that disease."[6] Besides homosexuals,[3,4,7,8,9] other populations at risk appear to include intravenous drug abusers, [10,11] Haitian immigrants, persons with hemophilia A, [6,12,13] and infants and young children who have received blood tranfusions.[14] One report also suggests heterosexual transmission.[15] A wide variety of infections which usually occur only in immunocompromised hosts have been reported, including candidiasis,[4,15] pneumocystis pneumonia, [3,4,15,16] toxoplasmosis,[17] cryptococcosis,[4,16] strongyloidiasis,[6] cryptosporidiosis.[18] cytomegalovirus,[4,16,19] disseminated atypical mycobacteriosis,[7] and herpes simplex infections.[4,15,20] In addition, these populations appear to be at risk of developing Kaposi's sarcoma [5,19,21] and autoimmune thrombocytopenic purpura.[22]

TABLE 2

T-Lymphocyte Subpopulations in a Patient With AIDS

Monoclonal antibody	Cells defined	Percent	Normal Range
OKT 3	Total T cells	83%	65-91%
OKT 4	Helper cells	9%	46%
OKT 8	Suppressor cells	63%	28%
Ratio of OKT 4/OKT 8		0.14	1.6

A total of almost 2,000 cases fitting the above description have now been reported to the CDC, (personal communication, August 1983). One feature of the syndrome is the presence of deficient cellular immune function similar to that demonstrated in the patient described here.[3,4,20,23] Skin test anergy was present, and the lymphocyte response to mitogen stimulation was abnormal (Table 1).

Monoclonal antibodies have been employed to define various T-lymphocyte subpopulations in these patients. The antibody OKT 4 is a marker for helper T-cells while OKT 8 determines the percentage of suppressor T-cells in the peripheral blood.[24] Table 2 shows the results of monoclonal antibody testing in the patient described above. A decrease in the number of helper/inducer cells and an increase in suppressor/cytotoxic cells was present with an OKT 4/OKT 8 ratio of 0.14 (normal 1.6). Similar findings have been seen in other patients with immune deficiency and opportunistic infection.[4,15,20,23]

The agents infecting these patients are not ordinarily pathogenic for otherwise healthy individuals, and are



Fig. 1. Barium swallow showing esophageal candidiasis in a patient with AIDS.

predominantly those normally controlled by cellular immune functions. The clinical infections seen have been in persons in whom there has been demonstrated skin test anergy, lymphopenia, blunted lymphocyte response to mitogens, depletion of T-helper lymphocytes and possible stimulation of T-suppressor lymphocytes, and defective natural-killer-cell activity.[3,4,9,15,20,23] There do not appear to be deficiencies in circulating immunoglobulins.

The epidemic of immunosuppression and opportunistic infections has thus far occurred predominantly in populations with epidemiologic similarities. Drug addicts, homosexual men, and Haitian immigrants have been involved in the majority of cases, suggesting an agent transmitted as a result of sexual promiscuity, sharing of needles (and therefore blood exchange), or ritualistic tattoing or marking. Also significant is that recipients of transfusions *(ie,* hemophiliacs, others), and infants born to sexual partners of drug addicts have developed a similar syndrome characterized by the same cellular immune deficiencies. Many of these patients are known to have had multiple viral infections (*ie* CMV, herpes simplex, Epstein-Barr), and viral infections may produce an immunosuppressed state.[25,26] Such immune dysfunction then predisposes the patient to opportunistic and neoplastic disease. One infectious agent suspected in the pathogenesis of AIDS is CMV. All of the patients in the UCLA series had at least one positive CMV culture during the period of observation.[3] Transient abnormalities in cellular immune function have been seen in otherwise healthy individuals during the course of CMV infections,[26] and in renal transplant patients CMV may produce leukopenia and predispose to other opportunistic infections.[27] Homosexual patients have been shown to have higher rates of serologic evidence of CMV infection than age-matched controls,[28] and this virus has the capacity to be transmitted sexually.[29] Note that although in the patient described here CMV cultures were negative during his illness, his serum CMV titer markedly increased over a three-month period, suggesting active but asymptomatic CMV infection.

This patient had not used nitrate inhalants ("poppers") during sexual activities. These agents have been used by many patients described in previous reports and are suspected in the pathogenesis of the syndrome.[8]

A theory of "immunologic overload"[5] may explain AIDS on the basis of multiple infections in the same patient overwhelming the immune system. This patient, like many other homosexuals,[30] had several different infections during the year preceding admission (gonorrhea, syphilis, Hepatitis B, and giardiasis); thus, immunologic overload could have been present.

Most of the reported patients with AIDS have resided in large metropolitan areas such as New York and Los Angeles. Careful epidemiologic questioning failed to identify any obvious factors which might have been contributing to immune deficiency in the patient seen here, and it has not been possible to determine if any of his sexual partners were natives of or had visited major metropolitan areas.

Of the AIDS patients reported to the CDC, 42% have died, and projections are that the mortality will be appreciably higher. Because of evidence suggesting infectious transmission, and the recent reports of transfusion[14] and sexually associated[15] AIDS in otherwise healthy patients, the CDC has suggested that hospitals in which such patients are confined undertake extensive precautions for the protection of their per-

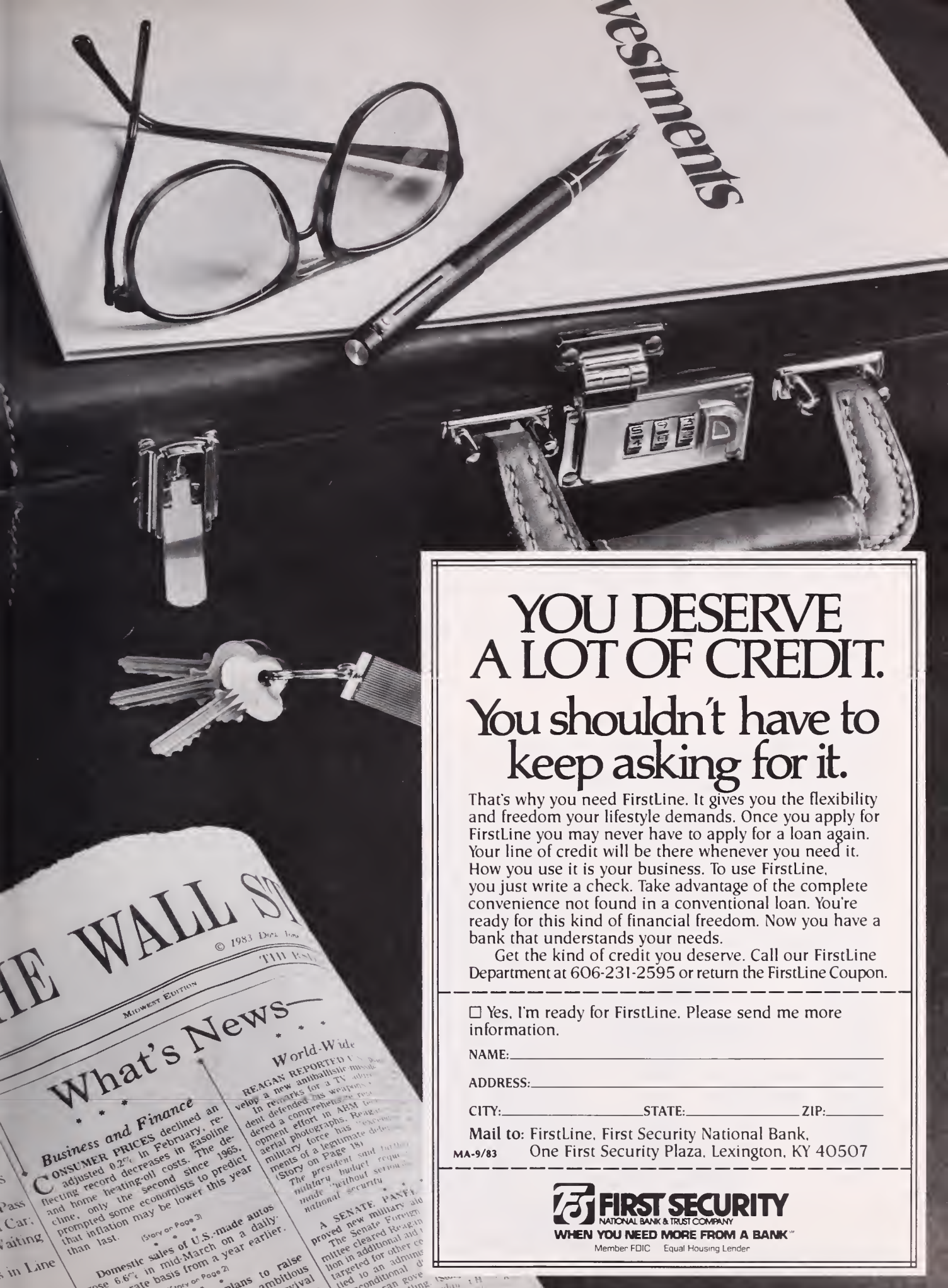
sonnel.[31] Of course, physicians must now be alert to the possibility of this syndrome developing in the patient populations at risk. Once identified, AIDS patients such as the one reported here, must be carefully followed for the development of other opportunistic infections or neoplastic diseases such as Kaposi's sarcoma. The causative agent has not been identified, and whether removal of risk factors (homosexual activities or intravenous drugs) will lead to reconstitution of immune function has not been determined.

Addendum

Since completeing this article another patient, a male homosexual with multiple sexual partners, has been seen by the authors. He has the immune deficiency characterized by inversion of the T-lymphocyte helper to suppressor ratio, and mucocutaneous candidiasis. The CDC has now reported four cases in hospital employees, only one of whom had potential contact with blood products, and none had documented contacts with known AIDS patients or were in high risk groups. The mortality is now at least 50% and there are no known patients who have recovered or been cured of this condition for which the cause remains unknown.

References 1. *Pneumocystis* pneumonia—Los Angeles. *Morbid Mortal Weekly Rep* 30:250-252, 1982. 2. Kaposi's sarcoma and *Pneumocystis* pneumonia among homosexual men—New York City and California. *Morbid Mortal Weekly Rep* 30:305-308, 1981. 3. Gottlieb MS, Schroff R, Schanker HM, Weisman JD, Fan PT, Wolf RA, Saxon A: *Pneumocystis carinii* pneumonia and mucosal candidiasis in previously healthy homosexual men: evidence of a new severe acquired immunodeficiency. *N Engl J Med* 305:1425-1431, 1981. 4. Mildvan D, Mathur U, Enlow R, Romain PL, Winchester RJ, Colp C, Singman H, Adelsberg BR, Spigland I: Opportunistic infections and immune deficiency in homosexual men. *Ann Intern Med* 96:700-704, 1982. 5. Haverkos HW, Curran JW: The current outbreak of Kaposi's sarcoma and opportunistic infections. CA-A Cancer Journal 32:330-339, 1982. 6. Update on acquired immune deficiency syndrome. *Morbid Mortal Weekly Rep* 31:507-514, 1982. 7. Zakowski P, Fligiel S, Berlin OGW, Johnson BL: Disseminated *Mycobacterium avium-intracellulare* infection in homosexual men dying of acquired immunodeficiency. *JAMA* 248:2980-2982, 1982. 8. Durack DT: Opportunistic infections and Kaposi's sarcoma in homosexual men. *N Engl J Med* 305:1465-1467, 1981. 9. Stahl R, Friedman-Kien A, Dubin R, Marmor M, Aolla-Pozner S: Immune abnormalities in homosexual men with Kaposi's sarcoma. (Abstract) Fed Proc 41:955, 1982. 10. Greene JB, Gurdip SS, Lewin S, Levine JF, Masur H, Simberkoff MS, Nicholas P, Good RC, Zolla-Pozner SB, Pollack AA, Tapper ML, Holzman RS: *Mycobacterium avium-intracellulare:* A cause of disseminated life-threatening infection in homosexuals and drug abusers. *Ann Intern Med* 97:534-546, 1982. 11. Gold KD, Thomas L, Garrett TJ: Aggressive Kaposi's sarcoma in a heterosexual drug addict. *N Engl J Med* 307:498, 1982. 12. *Pneumocystis carinii* pneumonia among persons with hemophilia A. *Morbid Mortal Weekly Rep* 31:365-367, 1982. 13. Update on acquired immune deficiency syndrome (AIDS) among patients with hemophilia A. *Morbid Mortal Weekly Rep* 31:644-646,652, 1982. 14. Possible transfusion-acquired AIDS. *Morbid Mortal Weekly Rep* 31:652-654, 1982. 15. Masur H, Michelis MA, Wormser GP, Lewin S, Gold J, Tapper ML, Gion J, Lerner CW, Armstrong D, Setia U, Sender JA, Siebkin RS, Nicholas P, Arlan Z, Maayan S, Siegal FP, Cunningham-Rundles S: Opportunistic infection in previously healthy women. *Ann Itern Med* 97:533-539, 1982. 16. Follansbee SE, Busch DF, Wofsy CV, Coleman DL, Gullet J, Aurigemma GP, Ross T, Hadley WK, Drew L: An outbreak of *Pneumocystis carinii* pneumonia in homosexual men. *Ann Intern Med* 96 (Part 1):705-713, 1982. 17. Hauser WE, Laft BJ, Conley FK, Remington JS: Central-nervous system toxoplasmosis in homosexual and heterosexual adults. *N Engl J Med* 307:498, 1982. 18. Cryptosporidiosis: assessment of chemotherapy of males with AIDS. Morbid Mortal Weekly Rep 31:589-592, 1982. 19. Urmacher C, Myskowski P, Ochoa M, Kris M, Safai B: Outbreak of Kaposi's sarcoma with cytomegalovirus infections in young homosexual men. *Am J Med* 72:569-575, 1982. 20. Siegal FP, Lopez C, Hammer GS, Brown AE, Kornfeld SJ, Gold J, Hassett J, Hirchman SZ, Cunningham-Rundles C, Adelsberg BR, Parham DM, Siegal M, Cunningham-Rundles S, Armstrong D: Severe acquired immunodeficiency in male homosexuals, manifested by chronic perianal ulcerative herpes simplex lesions. *N Engl J Med* 305:1439-1444, 1981. 21. Friedman-Kien AE, Lautsenstein LJ, Rubenstein P, Buimovici-Klein E, Marmor M, Stahl R, Spigland I, Kim KS, Zolla-Pozner S: Disseminated Kaposi's sarcoma in homosexual men. *Ann Intern Med* 96(Part 1):693-700, 1982. 22. Morris L, Distenfeld A, Amorosi E, Karpatkin S: Autoimmune thrombocytopenic purpura in homosexual men. *Ann Intern Med* 96(Part 1):714-717, 1982. 23. Kornfeld H, Stouwe RAV, Lange M, Reddy MM, Grieco MH: T-lymphocyte subpopulations in homosexual men. *N Engl J Med* 307:729-730, 1982. 24. Reinherz EL, Schlossman SF: Regulation of the immune response - inducer and suppressor T-lymphocyte subsets in human beings. *N Engl J Med* 303:370-373, 1980. 25. Hamilton JR, Overall JC Jr, Glasgow LA: Synergistic effect on mortality in mice with murine cytomegalovirus and *Pseudomonas aeruginosa, Staphylococcus aureus* or *Candida albicans* infections. *Infect Immun* 14:982-989, 1976. 26. Carney WP, Rubin RH, Hoffman RA, Hansen WP, Healey K, Hirsch MS: Analysis of T-lymphocyte subsets in cytomegalovirus monomucleosis. *J Immunol* 126:2114-2116, 1981. 27. Rubin RH, Cosimi AB, Tolkoff-Rubin NE, Russell PS, Hirsch MS: Infectious disease syndromes attributable to cytomegalovirus and their significance among renal transplant patients. *Transplantation* 24:458-464, 1977. 28. Drew WL, Mintz L, Miner RC, Sands M, Ketterer B: Prevalence of CMV infection in homosexual men. *J Infect Dis* 143:188-192, 1981. 29. Lang DJ, Kummer JF, Hartley DP: Cytomegalovirus in semen: persistence and demonstration in extracellular fluids. *N Engl J Med* 291:121-123, 1974. 30. Heller M: The gay bowel syndrome. *Ann Emerg Med* 9:487-493, 1980. 31. AIDS precautions for clinical and laboratory staffs. *Morbid Mortal Weekly Rep* 31:577-580, 1982.

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References: 1. Garrisan FH. *An Introduction to the History of Medicine*, 4th ed. Philadelphia, W. B. Saunders Company, 1929, pp. 507-508. **2.** Packard FR. *History of Medicine in the United States*, vol. II. New York, Hafner Publishing Company, 1963, pp. 727-728. **3.** Shaftel N. The evalution of American medical literature, in *History of American Medicine*, edited by Marti-Ibañez F. New York, MD Publications, 1959, p. 106



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References: 1. Rickels K: Drug treatment of anxiety, in *Psychophormocology in the Proctice of Medicine,* edited by Jarvik ME; New York, Appletan-Century-Crafts, 1977, p. 316. **2.** Feighner JP *et al: Psychophormocology 61:*217-229, Mar 1979. **3.** Data on file, Haffmann-La Rache Inc., Nutley, NJ.

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***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
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Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
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Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.
Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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Peripheral Vascular Disease

SUSAN E. BRIGGS, M.D.

The continuing challenge facing vascular surgeons today is successful limb salvage and the avoidance of amputation in patients with extensive peripheral vascular disease. In pursuit of this goal, increasingly complex vascular reconstructive procedures are being performed. Numerous therapeutic modalities have been developed as adjuncts in the management of difficult vascular problems. Two modalities, percutaneous transluminal angioplasty and thrombolytic therapy are proving to be increasingly valuable in the management of patients with peripheral occlusive disease.

PERCUTANEOUS TRANSLUMINAL ANGIOPLASTY

Percutaneous transluminal angioplasty (PTA) is the radiologic procedure in which special catheters are used to dilate vascular stenoses or to recanalize occluded vessels. Dotter and Judkins[1] first successfully employed the technique of PTA in 1964 and it has been utilized with increasing frequency since that time. Current applications of PTA include its use as the sole therapeutic procedure in the management of peripheral occlusive disease or as an adjunct to conventional vascular reconstructive surgery.[2,3]

Techniques

PTA may be successfully performed in most patients with dilating catheters introduced percutaneously under local anesthesia. The most common approach is via the ipsilateral or contralateral femoral artery. Alternative methods, such as catheterization via the axillary artery, may be utilized if the femoral artery is inaccessible as the result of occlusive disease or previous bypass surgery. Fluoroscopy with image intensification is necessary to accurately position the catheter at the site of vessel occlusion or stenosis. Various catheters have been utilized, including Fogarty balloon catheters, "caged" catheters, polyvinyl chloride catheters and polyethylene balloon catheters. Guidewires are essential to facilitate passage of the balloon catheter across the stenotic area. Pre- and post-angioplasty pressure gradients across the stenosis are measured. In the case of occluded vessels, patency of the vessel post-angioplasty is confirmed by arteriography. The use of anticoagulants such as heparin and coumadin post-angioplasty remains controversial.

Complications

Local complications such as bleeding and/or hematoma at the site of arteriotomy and cellulitis comprise the majority of reported complications. Peripheral embolization, subintimal dissection, vessel perforation and vessel spasm are other reported complications of PTA.

Indications

Percutaneous transluminal angioplasty is effective when used in the treatment of a localized, hemodynamically significant lesion of the ileofemoral system. The majority of patients with PTA have atherosclerotic disease as the underlying cause of the vascular stenosis or occlusion. However, PTA has been used in the management of fibroplasia and arteritis. Localized stenotic lesions that are 4 cm or less can be treated by PTA with a high rate of success. The results of PTA with lesions between 4 cm and 10 cm vary widely in reported series. Lesions greater than 10 cm in length are best treated by surgical bypass procedures. Most series[4] report comparable two-year patency rates (80% patency) with PTA and saphenous vein grafts in the treatment of localized stenoses. Long-term patency rates are not well documented at this time.

The use of PTA as a combined approach with vascular reconstruction has been of great importance to surgeons. PTA may be of benefit preoperatively to improve inflow or outflow; percutaneous transluminal angioplasty may be utilized postoperatively to correct new inflow or outflow lesions that threaten graft patency or to correct stenosis of the bypass graft itself.



Fig 1A: A 62-year-old female with localized stenosis of the right common iliac artery and occlusion of the superficial femoral artery who presented with non-healing ulcers of the right lower leg and rest pain.



Fig 1B: Post-angioplasty film showing complete resolution of right iliac stenosis. Following angioplasty for improved inflow, patient underwent right femoral-popliteal bypass graft utilizing Gortex with complete resolution of her rest pain and healing of leg ulcers.

Specifically, PTA has been useful in the following situations: (1) improved inflow for femoral-femoral or femoral-popliteal bypass grafts (see Fig. 1); (2) improved inflow to the site of a proposed amputation or skin graft; (3) late graft stenosis; (4) improved outflow for aortoiliac and aortofemoral grafts; (5) improved outflow for femoral-popliteal grafts.[2]

THROMBOLYTIC THERAPY

Historically, thrombolytic therapy was first advocated as an alternative approach to vascular occlusive disease if surgical intervention was neither feasible nor possible. Currently, increasing interest has focused on the use of thrombolytic agents in conjunction with vascular reconstructive procedures.[5] Two exogenous plasminogen activators, streptokinase and urokinase, are the mainstay of current thrombolytic therapy.

Mechanism of Action

Both the coagulation and fibrinolytic systems are essential for maintenance of normal hemostasis (Fig. 2). The fibrinolytic system involves the conversion of plasminogen to plasmin, which facilitates the breakdown of fibrin to its end products. Plasmin is specific for dissolving fibrin clots within the thrombus where a low concentration of plasmin-inhibitor is present. Streptokinase and urokinase are exogenous plasminogen activators which facilitate this conversion of plasminogen to plasmin (Fig. 3). Streptokinase indirectly activates the conversion of plasminogen to plasmin via an intermediate activator complex. Urokinase directly activates the conversion of plasminogen to plasmin.[6]

Significant differences exist between the two agents (Table 1). Streptokinase is harvested from tissue cultures of Group C streptococci, and is commercially available

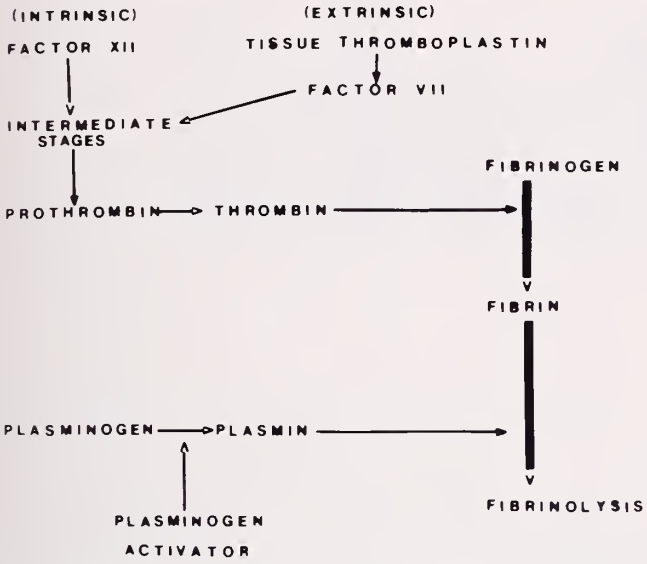


Fig 2: Brief schema of fibrinolytic and coagulation systems.

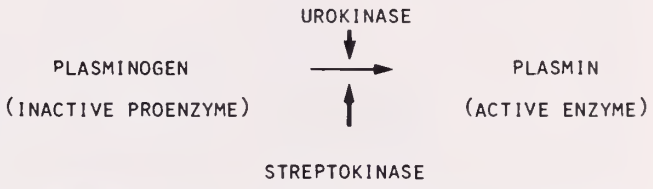


Fig 3: Mechanism of action of streptokinase and urokinase.

Table 1. Comparison of streptokinase and urokinase.

Streptokinase	Urokinase
Group C streptococci	Human fetal kidney tissue culture; human urine
47,000 Daltons (MW)	32,000-54,000 Daltons (MW)
10-12 min half-life	11-16 min half-life
Antigenic	Nonantigenic
Retreatment: 6-12 months	Retreatment: as needed

as Streptase (Hoechst-Roussel Pharmaceuticals) and Kabikinase (KABI Group). Urokinase is found in human urine but current preparations are processed from human fetal kidney cells. Urokinase is commercially available as Abbokinase (Abbott Laboratories).

The antigenecity of streptokinase is one of its distinguishing characteristics. Streptococcal infections occur commonly in the population, and most individuals possess antibodies to streptococcus. Streptokinase functions as a foreign protein or antigen and combines with the antibodies. This antigen-antibody complex possesses no thrombolytic activity. A sufficient loading dose of streptokinase must be given to neutralize or inhibit circulating antibodies.

Method of Administration

Thrombolytic agents may be given intravenously or by local infusion via angiographic catheter. The latter is the method of administration most frequently utilized as it allows for lower doses and more selective administration at the site of vascular occlusion. Recommended doses for systemic usage of streptokinase are 250,000 units over 30 minutes (loading dose) and 100,000 units/hour in D5W (maintenance dose). The loading dose for urokinase is 2,000 units/lb over 10 minutes and the maintenance dose is 2,000 units/lb/hr.[7] The dosage utilized with local catheter infusion varies greatly depending on the degree and duration of occlusion.[8]

Complications

Fever, allergic reactions and local bleeding at the site of administration or at the site of recent invasive surgical procedures comprise the majority of reported complications.[9] The short half-life of these agents (10-15 minutes) allows early discontinuation of the drug should significant bleeding occur. Laboratory tests for monitoring thrombolytic therapy include determining whole blood euglobulin lysis time, prothrombin time, partial thromboplastin time, thrombin time, and fibrinogen degradation products.

Indications for Therapy

Thrombolytic therapy has been used clinically in the following conditions: (1) acute pulmonary embolism; (2) acute deep venous thrombosis; (3) arterial thrombosis; (4) acute myocardial infarction; (5) occluded vascular access shunt; and (6) occluded intravascular or cavity catheter.

In the management of patients with peripheral vascular disease, thrombolytic therapy has been used in acute arterial occlusion secondary to both thrombus and embolus and in chronic arterial occlusion. Recent series in the literature report the successful use of thrombolytic therapy in combination with PTA or vascular reconstruction for these conditions.[10,11] Although the reported rate of success with acute and chronic arterial occlusions varies widely, the documented benefit of thrombolytic therapy at the present is sum-

marized by the following statements: (1) clot lysis and reinstitution of vessel/graft patency is possible if the occlusion is acute (within seven days); (2) if a mechanical defect (*ie*, stenosis) is the underlying cause of the occlusion and this is corrected by PTA or surgery following thrombolytic therapy, reasonable graft/vessel patency has resulted and; (3) thrombolytic therapy has minimal benefit in chronic arterial occlusion.

References 1. Dotter CT, Judkins MP: Transluminal treatment of arteriosclerotic obstruction: Description of a new technique and a preliminary report of its application. *Circulation* 30:654-670, 1964. 2. Waltman AC: Percutaneous transluminal angioplasty: Iliac and deep femoral arteries. *AJR* 135:921-925, 1980. 3. Kadir S, Smith GW, White RI, Kaufman SL, Barth KH, Williams GM, O'Mara CS: Percutaneous transluminal angioplasty as an adjunct to the surgical management of peripheral vascular disease. *Ann Surg* 195(6):786-799, 1982. 4. Greenfield AJ: Percutaneous transluminal angioplasty of the femoral, popliteal, and tibial vessels. In Athanasoulis CA, Greene RE, Pfister RC, and Roberson GH, (Eds), Interventional Radiology. Philadelphia, W.B. Saunders Co, 1982, pp286-298. 5. Bell WR: Thrombolytic therapy A new realistic approach in treatment of thrombo-occlusive vascular disease. *Surgery* 92(5):913-914. 1982. 6. Sharma GVRK, Cella G, Parisi AF, Sasahara AA: Drug Therapy. *N Engl J Med* 306(21):1268-1276, 1982. 7. Marder VJ: The use of thrombolytic agents: Choice of patient, drug administration, laboratory monitoring. *Ann Intern Med* 90:802-808, 1979. 8. Galland TE, Athanasoulis CA: Regional infusion of thrombolytic enzymes. In Athanasoulis CA, Greene RE, Pfitser RC, and Roberson GH, (Eds), Interventional Radiology. Philadelphia, W.B. Saunders Co., 1982, pp374-378. 9. Urokinase—Streptokinase embolism trial. Phase 2 results. A cooperative study. From the Urokinase Pulmonary Embolism Trial Study Group. *JAMA* 229(12):1606-1613, 1974. 10. Hargrove WC, Berkowitz HD, Freiman DB, McLean G, Ring EJ, Roberts B: Recanalization of totally occluded femoropopliteal vein grafts with low-dose streptokinase infusion. *Surgery* 92(5):890-895, 1982. 11. Hargrove WC, Barker CF, Berkowitz HD, Perloff LJ, McLean G, Freiman D, Ring EJ, Roberts B: Treatment of acute peripheral arterial and graft thromboses with low-dose streptokinase. *Surgery* 92(6):981-1000, 1982.

From the Department of Surgery, University of Louisville School of Medicine, Louisville, Kentucky. Reprint requests to: Susan E. Briggs, M.D., Department of Surgery, Ambulatory Care Building, University of Louisville, Louisville, KY 40292.

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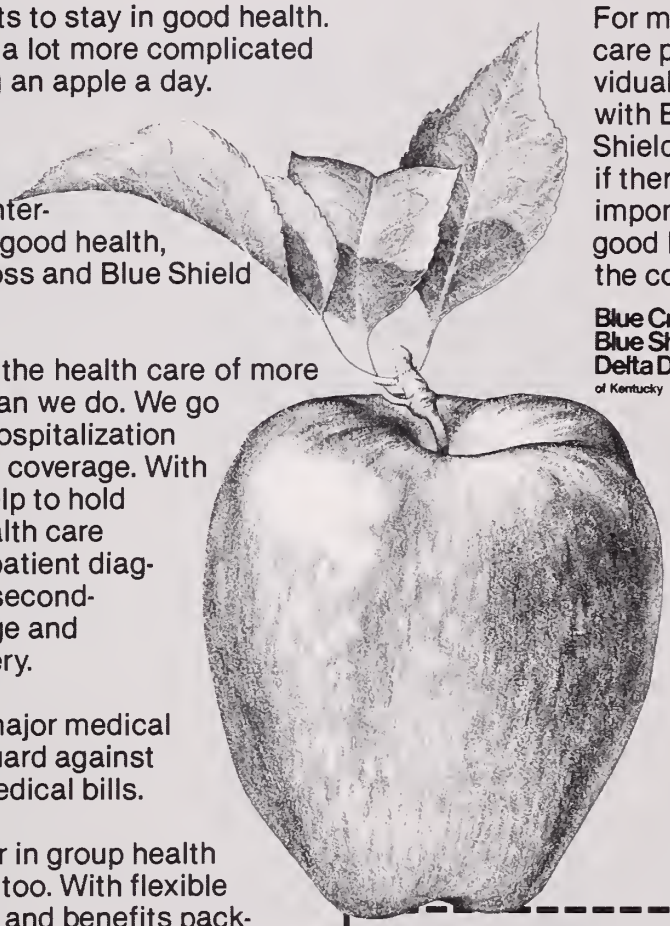
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(Medical Section of the American Lung Association of Kentucky)

October 28-29, 1983 — **PROGRAM** — Barren River State Park, Lucas, KY

FRIDAY, OCTOBER 28

MODERATOR: Steve Kraman, MD
VA Medical Center
Lexington, KY

I. LECTURE SERIES

1:00 p.m. — **"Hirudiniasis, Thesaurosis, Pooter's Lung and Other Occupational Exotica"**
Stanley R. Rehm, MD
VA Medical Center
Lexington, KY

1:30 p.m. — **"A Review of 100 Applicants for Federal Black Lung Benefits: Results of Multiple Physician Exams"**
William H. Anderson, MD
Chief, Division of Respiratory & Environmental Medicine
University of Louisville School of Medicine
Louisville, KY

2:00 p.m. — **1983 L. E. SMITH LECTURE**
"Asbestos-Related Disease"
Edward A. Gaensler, MD
Professor of Surgery and Physiology
Boston University Medical School
Boston, MA

2:45 p.m. — BREAK

II. SYMPOSIUM—**"Oxygen Therapy"**

3:00-5:00 p.m.

John A. Lloyd, MD
Pulmonary Disease Specialist
Louisville, KY

Toby Tomazic, RRT
Chief, Respiratory Therapy
U K Medical Center
Lexington, KY

Gayle C. Erickson
Pulmonary Care of Western Kentucky
Louisville, KY

5:00 p.m. — KTS Business Meeting

6:00-8:00 p.m. — Cocktails & Dinner

8:00-12 Midnight — Dance
The Billy Vaughn Orchestra

SATURDAY, OCTOBER 29

MODERATOR: John A. Lloyd, MD
Pulmonary Disease Specialist
Louisville, KY

I. ORIGINAL PAPERS

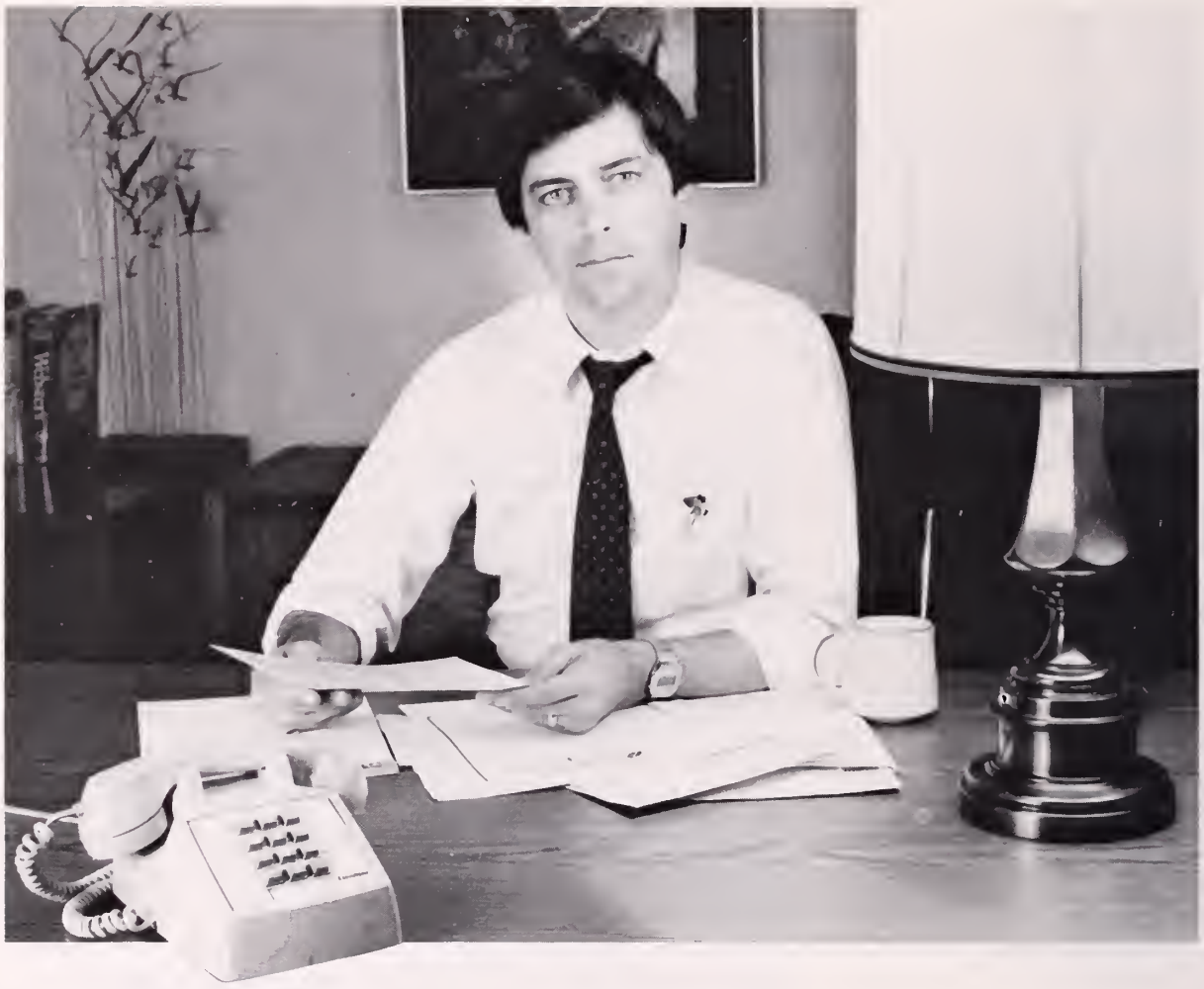
8:00 a.m. — Coffee and Doughnuts

8:30 a.m. — **Treatment of Pulmonary Interstitial Emphysema in Premature Infants with High Frequency Positive Pressure Ventilation**
J.L. Ransom, MD; C.K. Heritage, MD; N.D. Desai, MD; and M.D. Cunningham, MD
University of Kentucky College of Medicine
Department of Pediatrics

	8:45 a.m.	**Pulmonary Interstitial Emphysema in The Adult Respiratory Distress Syndrome** John A. Woodring, MD University of Kentucky College of Medicine Department of Diagnostic Radiology
	9:00 a.m.	**Reconstruction of Complex Massive Chest Wall Defects with New Refinements of Muscle and Musculocutaneous Flaps** Gordon R. Tobin, MD; Constantine Mavroudis, MD; W. Robin Howe, MD; and Laman A. Gray, Jr. MD University of Louisville School of Medicine Department of Surgery
	9:15 a.m.	**The Speed of Sound Through the Lungs of Normal Men** Steve S. Kraman, MD University of Kentucky College of Medicine Department of Medicine
	9:30 a.m.	**The Augmentation of Elastase-Induced Emphysema by Exposure to Cigarette Smoke in Rats** Edgar C. Kimmel, MD and Louis Diamond, PhD University of Kentucky College of Pharmacy
	9:45 a.m.	**Radionuclide External Localization at the Site of Abnormal Rib Uptake in Bone Scintigraphy: A Guide to Open Rib Biopsy for the Patient with Bronchogenic Carcinoma** W-J Shih, MD; F.H. Deland, MD; S. Magoun; P.A. Domstad; and M.L. Dillon, MD VA Medical Center and University of Kentucky Medical Center
	10:00 a.m.	**Pulmonary Blastomycosis: Diagnosis and Management** Sibu P. Saha, MD; Porter Mayo, MD; Graydon A. Long, MD; and R. Daley Goff, Jr., MD Thoracic and Cardiovascular Surgery Lexington, KY
	10:15 a.m.	BREAK
II.	CASE REPORTS	
	10:30 a.m.	**Repair of Recurrent Tracheal Stenosis with Neville Prosthesis** Sibu P. Saha, MD; Porter Mayo, MD; R. Daley Goff, MD and Graydon A. Long, MD Thoracic and Cardiovascular Surgery Lexington, KY
	10:40 a.m.	**Lymphoma of the Lung: Difficulties in Diagnosis** J.R. White, MD; M.L. Cibull, MD; and M. Kung, MD University of Kentucky Medical Center Departments of Medicine and Pathology
	10:50 a.m.	**Tension Pneumatocele in an Adult** William T. Mattingly, Jr., MD Cardio-Thoracic Surgery Lexington, KY
III.	1983 L.E. SMITH LECTURE	
	11:15 a.m.	**Misadventures in Occupational History Taking** Edward A. Gaensler, MD Professor of Surgery & Physiology Boston University Medical School Boston, MA
	12:00 noon	ADJOURN
IV.	POST-CONFERENCE SOCIAL EVENTS (SATURDAY)	
	1:30 p.m.	Golf Tournament Sponsored by M & M Medical Equipment, Lexington, KY
	6:00 p.m.	Houseboat Cruise & Cocktails Sponsored by CRTS, Inc., Bowling Green, KY

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Translaryngeal Ventilation

DANIEL DANZL, M.D.

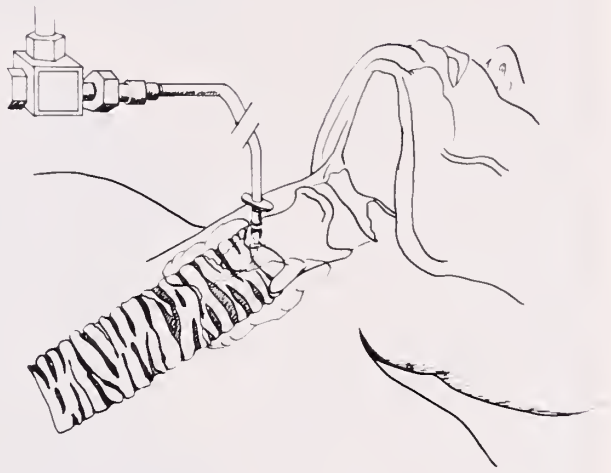
Translaryngeal positive pressure ventilation is a new temporizing alternate approach to airway obstruction when surgical cricothyroidotomy is not feasible. It is not a substitute for airway control with a cuffed tube.

The equipment required for this technique is readily available in emergency departments. The high pressure oxygen source can be provided by either a 50 psi wall source coupled to a flowmeter, or an oxygen tank with high pressure tubing and a push button release valve. The "pop-off" valve (Flynn,(R) Robertshaw,(R) Elder(R)) should be set at 50 cm H_20 for adults, and 30 cm H_20 for small children to prevent barotrauma. The valve, which releases when the airway pressure exceeds the setting, is attached to the end of the high pressure tubing.

To perform the technique, puncture the inferior aspect of the cricothyroid membrane at a caudal angle with a 14 gauge over-the-needle standard plastic IV catheter (Fig I). After removing the needle, advance the catheter towards the carina. Attach the IV catheter to a 3.0 mm Shiley(R) adaptor. The "pop-off" valve, connected to the oxygen source with the high pressure tubing, fits snuggly over the adaptor. The patient is ventilated for approximately one full second, or until the chest begins to rise. The valve is then released for four to five seconds to allow exhalation. If exhalation is inadequate, as in complete airway obstruction near the glottis, a second catheter with a three-way stopcock should be inserted next to the first one. The stopcock is closed during inspiration and open during exhalation. An alternative technique is to cover the second IV catheter with a finger during inhalation. Start ventilating with the high pressure source set at 25 psi until correct catheter placement is assured. Then turn up the source to 50 psi.

Any material obstructing the airway may be dislimpacted by the positive airway pressure from below. In addition, translaryngeal catheter ventilation may be a temporizing maneuver in traumatized patients who are unable to be nasotracheally intubated until the status of the cervical spine is known.

The complications of this technique include those occurring with puncture of the cricothyroid membrane. Significant hemorrhage is not seen if proper



TRANSLARYNGEAL INSUFFLATION

landmarks are identified. Interstitial oxygen insufflation into tissue planes is possible if the catheter is misplaced or with lung barotrauma. Barotrauma, or injury from the delivery of oxygen at high pressure and flow rates, can also result in a pneumothorax with overzealous insufflation. Tearing the anterior wall of the esophagus is possible. Upper airway secretions can be exsufflated or blown out of the airway by the pressure from below. Direct suctioning is not possible.

High frequency jet ventilation via percutaneous translaryngeal catheters has also been reported for emergency ventilation. The frequencies are 100 to 500 per minute, with tidal volumes less than the dead space. The advantages of this approach are that the jet ventilators are compact and portable, there is no need to synchronize respirations, and the low airway pressure is unlikely to induce barotrauma. Double-lumen tubes, which reach variable distances from the carina, are being developed to facilitate exhalation in patients with complete glottic obstruction.

Familiarity with the necessary equipment and the technique of translaryngeal positive pressure ventilation widens the emergency physicians' armementaria to successfully manage complex airway problems.

From the U of L School of Medicine, Department of Emergency Medicine, at the request of the KMA Continuing Medical Education Committee.

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EDITORIAL

"Anything Not Forbidden Is Mandatory"

Once upon a time physicians thought the courses of our lives would be charted by ourselves, using fine things like integrity and wisdom and vigor and personal choice. We were pretty idealistic and we often failed and we didn't mix in nearly enough humility and unselfishness. So then came the suggestion that the Government would direct our ways and our lives, but missiles and interest on the National Debt sops up all that Washington can borrow. Now there is a new approach: Competition, corporations, and unincorporated competition are said to be the cutting edge of medicine's future and one must approach these elements with an open mind. There are lots of new words and phrases and it's very confusing.

"We'll hear today from the Chairman of the Study Committee." The assembled doctors sipped coffee and settled down uneasily. The chairman was urbane and voluable.

". . . three ways to go—HMO's, PRO's and IPA's—no, don't ask questions, at least not yet. As providers we've got a real job selling these packages in the market place. The important thing is the terms of the contract with the buyer, offering discounts to the vendors from the providers for the clients. What? Oh, you know what a client is: it's the new name for the one who absorbs care. Some of the other disciplines thought the word 'patient' was too patronizing. Anyway, with these DRG's coming in we've got to enhance our market share, expecially now that these new beds are coming on line. An effective review mechanism involving both users and providers as defined by Title LXXI of the Federal Guidelines has got to address the quality of services rendered in the entire package. We'll need new oversight committees.

"No, please hold your questions; you'll only confuse things. Now to conceptualize this, let's see it as a series of one-way streets without grade separations and only left turns permitted . . . please Charlie, it is not a big mess, not yet anyway. We've got to consider Public Relations and the insurance industry and we've got to make the health care dollar stretch a little more. Gee, I know, guys, we all get scared sometimes. Even I get scared but there aren't any alternatives coming on the scene. You've got to see it in historical perspective . . . that's right, Ray, we know about England and dearth and famine and all, with the pieces falling into place."

"Now here's the bottom line: They say you may have to cut your fees a little bit to be competitive. Not much, just, say, ten or twenty percent should do the job for this PRO. What's that? . . . Well, yes, even surgeons may have to reduce their fees . . . now come on guys, we can't have an intelligent consideration if you shout like that . . ."

"Okay, we've got to address the issues and somehow put a cap on it. Actuarily, They say we can't end up in the hole because we'll be an insurance broker, not a carrier. The pressures are very real, a fact of life, we're down to the crunch and an ounce of prevention is worth a pound of cure, but a second slight hole in the argument is that there are a lot more doctors now. We've overshot in training and importing—it was Government Policy. Yes, maybe it was Humana Policy, too."

"In our kind of business we've got to take the second question first. I know it sounds like doublespeak, but you can't talk about it at all if you don't use doublespeak. We've got to do it to ourselves before They do it to us. If Charlie here has been bustin' his rear-end for 20 years, taking care of this woman and They say she has to go to an HMO he's fighting a losing battle. Dollars are going to speak to people: They don't give a damn about good medicine."

"You can't run your business like you used to run your practice, They say. We've got to get it on line by 1984 and we're not yet sure who Big Brother is going to be—but it won't be a doctor, They say."

Subdued and grateful we reached for our pens to fill out the application blanks.

**(The writer recently attended an Organizational Meeting and took notes as fast as he could.)*

David L. Stewart, M.D.

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SPECIAL ARTICLE

The Chicken and the Egg

A chicken is only an egg's way of making another egg.

Samuel Butler
1877

The idea that a medical staff is just one of several "departments" created by and based within an entity called a hospital is perplexing, yet, without doubt, this legalese continues to pervade organized hospital literature almost to the point of nausea.

The ancient argument of what came first, the chicken or the egg, must be put to rest. An association of physicians, the medical staff, can exist independently from a hospital and is organized with only one intent, to fulfill the collective requirements of its patients. One of these requirements is a gathering place where physicians can direct the care of their patients. It may be a clinic, a nursing home, a church auditorium, a M-A-S-H tent or, as was the case in the Civil War, beneath an old oak tree; any locale will suffice.

That a separate entity cannot function unless a part of the unified whole is totally misleading and completely absurd. Abundant examples exist in the business and professional communities as well as government. The co-existence and cooperative endeavors of community organizations are important to our society. Each is separate and independent and there need not be the sacrifice of one in the pursuit of joint enterprise.

Our state government is another excellent example. Government is composed of independent agencies responsible for certain aspects of governmental operation. Although a part of the whole, each can and does function independently. Kentuckians are not dismayed when an agency battles in court for its perceived rights.

The hospital and medical staff exist independently and common sense principles permit one rational conclusion, the medical staff and governing board should exercise their responsibilities without the need to deny the true existence or extinguish the legal rights of the other. History and our courts have agreed, but new trends in court cases and governing board policies may alter this established course.

In order to insure quality medical care, the American College of Surgeons in 1918 developed *Minimum Standards*. The intent of the college was to mold physicians into formally structured groups organized to maintain quality medical delivery. There have been no philosophical or historical changes in these initial concepts. Courts have ruled repeatedly that any group of individuals organized for a mutual purpose, *ie*; quality medical care, will constitute an unincorporated association. This association is entitled to independent recognition and it may exercise rights permitted by state and federal law, including the right to sue and be sued. Like social clubs, lodges, religious associations, environmental groups, athletic boosters, and business consortiums, the medical staff is quite vulnerable to the whims of the law. There are current appellate decisions in many states which permit medical staffs to be sued totally independent from the hospital.

Even with this legal precedence of independence, a power struggle of immense proportions swells like a tidal wave in a ferocious wind. Who will ultimately direct the delivery and insure the quality of medicine and from where will it be controlled remains unanswered. With the onslaught of governmental agencies, third party payors, hospitals, and alas, our own professional organizations, medical staffs continue to give ground. We are nearly to the last trench and from there only the bugle of retreat will be heard. The medical staff will be a "department" not unlike housekeeping and the days of treating "my" patient will evolve into "their" patients. The last decade has brought astounding changes in American medicine.

Just 15 years ago physicians were enthusiastic, optimistic, even euphoric about medicine. Now, over half of all American physicians are totally disenchanted, most to the point of not recommending medicine as a profession. A poll of physicians by Louis Harris and

Associates indicates a deep seated, and at times dark pessimism, with the future of medicine. Harris found that physicians were discouraged about the governmental regulations of their practices, loss of independence and autonomy, and continual interference with and erosion of the patient-physician relationship. Physicians were most distraught about an eventual surplus of doctors.

Too Many, Too Soon

Although Mounsey challenged the validity of the GMENAC (Graduate Medical Education National Advisory Committee) report on the future over abundance of physicians, at face value this report does indicate a significant upward trend. Since 1950 we have nearly doubled the number of physicians per 100,000 population, and from available data it appears that the training pipeline will remain full for years to come.

The swell of new physicians should impact the marketplace considerably, and in so doing, challenge existing medical staff-hospital relationships. Ideal pratice locations will fill early and medical staffs could bulge with new members unless some stop-gap mechanisms come into play. A swing towards close knit group practice arrangements is already in progress. This, in part, is fostered by women physicians who, although not recognized early on, actually prefer salaried, non-competitive positions with fixed working hours. Since the woman physician desires a slice of the more organized pie and since one-third of all new physicians are women, they too will adversely affect medical staff-hospital relations by aligning more closely with the hospital.

Added to the supply side of the picture is yet one more important and undeniable contribution, the American citizens studying medicine abroad, A fairly accurate figure puts it at about 10,000 and most, if not all, will return to their homeland after completion of training. This is in contradistinction to the foreign medical graduate who acquires post-graduate training in the U.S., and although his homeland may desperately need physicians, will not return home after completion of training.

The scenario is clear. The well will soon be filled with fresh physicians and the hospital need only drop its empty bucket and pluck precisely the specialty and mental attitude it desires. And since good positions will be scarce, he who has the position, like the fiddler, will call the tune. Already a feeling of impotence abounds in many medical communities, and physicians are seeking job and income security. Hospitals label these physicians entrepreneurs, independents, scalawags, and double dippers as they organize out-patient clinics, emergi-centers, surgi-centers, and home care programs. Most are looking at a rather bleak personal future in hospital medicine and want only to carve a small nitch that they can hang their stethoscope on and say "Hey, this is mine. I'm secure."

What Went Wrong?

We were taught in medical school to take care of the patient, insure quality medicine and the hospital will run itself. That concept was put to rest with the Elam vs. College Park Hospital Court of Appeals case in California. Although the Court of Appeals finally modified its initial opinion after being petitioned by the California Medical Association, it concluded that a hospital might be totally responsible for the negligent acts of physicians practicing in the hospital. In other words, the physician would be treated as an employee of the hospital in the courts. Hospital corporate liability has always meant that the hospital is not responsible for a medical staff members negligence. This entirely new concept ajars the door and other future decisions may exert pressure on hospital boards to control and monitor all phases of credentializing, peer review, and quality. Medical staffs have always demanded the right to rule themselves and that the confidentiality of their patient's records and peer review be insured. It is now quite probable that all medical staff committee sessions will be attended by non-medical board members and other licensed hospital professionals. We are already seeing new faces at medical staff executive committee meetings around this state.

Many experts in hospital organization recognize a trend of complete board responsibility for all aspects of hospital care as civil liability in the hospital setting slowly shifts entirely to the hospital. At that moment when the medical staff member is no longer responsible for his independent acts, there will be little need for medical associations as we know them.

It Couldn't Happen To Us, Could It?

Power has been described as the capacity to exert influence in an organization. For years hospital power has been divided by the classic triumvirate—the medical staff, the administration and the hospital board. During the last decade, a distinct imbalance has occurred. Trustees have taken their jobs more seriously, imposed in part by court decisions, administrators have

opted for corporation type governance and gained structural power, while medical staffs have quietly watched in a "hands-off, it doesn't affect me" gesture. To that end, medical staffs now assume last place in hospital power and influence.

Physicians are astounded as hospitals build clinics, office buildings, consume other hospitals, establish outreach referral departments, purchase acres of adjoining land, houses and streets and market their services without approval or even the knowledge of medical staff. It is becoming clear that the physicians position in modern medicine will be that of a laborer and for better or worse, present day and future decisions will be made without him.

At a nearby university, hospital administration students are encouraged to complete their education by entering the law profession. An article by two aspiring administrator-lawyers described the legal position of a medical staff as merely "one of the divisions in a hospital." The article implied that physicians were professional staff of a hospital in the same light as physical therapists, pulmonary therapists, radiology technologists, nurses and other professionals and that the concept of the medical staff should evolve into a professional staff. Medical staff committees could be diluted with other hospital professionals and the medical staff bylaws be redefined in terms of profession bylaws and later into job descriptions for all hospital professionals including physicians. The future trend will be to infuse as many hospital professionals into medical staff committees and physician positions as possible. The method is not yet clear, but all should be aware of future attempts at medical staff weakening procedures.

Another weakening procedure which has been used effectively by hospitals is the one on one hospital—physician agreement called the contract. A totally useless document which in cases of physician-hospital disagreement are used to subdue the physician even when the physician is right.

The American Hospital Association states there are 62 issues that a physician-hospital agreement should address. Only three could possibly have merit; 1) payment for services, 2) exclusivity, 3) protection of due process. All others are or should be covered in the medical staff bylaws, rules, and regulations.

The first issue, payment: a physician specialist provides a consultative service to medical staff patients. The charge for this professional service is reimbursed by the patient's insurance company or self paid by the patient. If the hospital billing service collects these fees it is assumed they are hospital monies. Nothing could be further from the truth. The fees could be collected irrespective of the hospital's position. This concept applies to cardiology, radiology, emergency room physician, nephrology, surgery and all specialties. If the hospital and the physician agree that the hospital should bill, fine, no contract is needed. The best and safest of all positions is to self bill.

Exclusivity is another big issue. All physician professional organizations clearly indicate that the open staff principles be followed. The open staff principle simply means that any physician who desires to compete for patients in an open and free market, and has sufficient credentials for medical staff privileges in a hospital should be allowed the right of fair competition. It does not mean that a hospital should recruit, finance or otherwise foster and promote unfair and unethical competitive advantages to new physicians. If hospital boards allow or condon such acts the medical staff must call for their immediate resignation or bring to bear forces, financial and otherwise, that will encourage the board to reconsider its policy.

A few minor court decisions have allowed hospitals to close certain staff positions, but this legal precedence appears to be changing. A federal appellate court in New Orleans recently ruled that an exclusive contract between an anesthesiology group and a hospital violated the Sherman Antitrust Act. Other similar decisions are expected soon.

And finally, due process. Due process is the procedure whereby a grieved physician has a right to a hearing, may state his case, and may call witnesses to explain his position. Can this right to due process be guaranteed by a contract between hospital and physician? Legal council for one of the professional medical organizations warns, after reviewing many court cases, that signing any contract could amount to waiving the right to due process, even when the contract states explicitly that there will be guaranteed due process rights. Beware, any contract is dangerous to you and your medical staff's health.

To that end, the hospitals perceived needs should be submitted to the bylaws committee of the medical staff, and if agreed to and passed by the medical staff, become the rule of the staff. With our future in mind medical staff members and physicians with contracts should now become active in abolishing these agreements.

It Need Not Be Revolution

In conclusion, medical staffs are not sat on and hatched. They do not exist to serve the hospital, or be subservient to hospital governance, or state and federal governments. Medical staffs are organized to insure that quality medical care is provided not only by themselves, but by all primary care individuals in the hospital. The trend towards hospital dominance must stop. Doctor Paul Feldstein, University of Michigan, health economist, predicts the closing of 1,000 hospitals by the end of the decade. Many say this is a conservative figure. The win/loose confrontation course that hospitals now seem to want with medical staffs will bring a quick end to any hospital, even with a surplus of physicians. The best of all solutions could be engendered from something we have lost, mutual respect. Medical staffs must regain their position of authority in hospitals and with the shift in power to the board of governance, it can only be accomplished by sharing with the governing authority.

The reluctance of trustees to let physicians help steer the ship is still overwhelming. Yes, there is a physician or two on most boards graciously put there as a gesture of goodwill and benevolence towards the medical staff, but this gesture is not sufficient. The wedge is driven deeper everyday. It is difficult to believe that hospitals want to go it alone. Medical staffs must have at least 50% of the positions on every governing board or be left with one protective alternative, complete incorporation of the medical staff with corporate officers and corporate offices outside the hospital.

Legally, medical staffs are now being pushed in the corporate direction to protect the assets of individual staff members. If the medical staff can be fined for its actions, and Kentucky statute 311.606 states that it is indeed responsible for its acts, then it can also be sued independent of the hospital. Hospitals may not be willing, in light of the surplus of physicians, to protect medical staffs beyond the limits of their existing insurance, and even if they are, no rule or regulation prohibits the insurance company from filing claims against the medical staff or independent members of the staff. Cases are now pending in the Commonwealth where the hospitals' insurors filed counterclaim suits against medical staff members to recoup possible losses. In order to preserve millions in assets the insurance company is willing to lose one customer.

Let there be no mistake, the medical staff as we now know it is an endangered species. Our professional associations will pat us on the back and say "everything is just fine. There will be a few minor adjustments, we are still in control. Our purpose is quality and what is right." Physicians and medical associations must quit giving ground because of a fear of suits and retaliation. Are there no immaginative minds in our professional associations? Physicians have been retreating for the last 15 years. We are on the edge of extinction as the purveyors of primary health care in America. We don't want a revolution, but we will either evolve into stronger and healthier organizations as the pressures mount, or slip one by one into obscurity. Get off your duff professional organizations, we need help!

C. Dale Brown, M.D., McCracken County Medical Society.

In vitro studies demonstrate

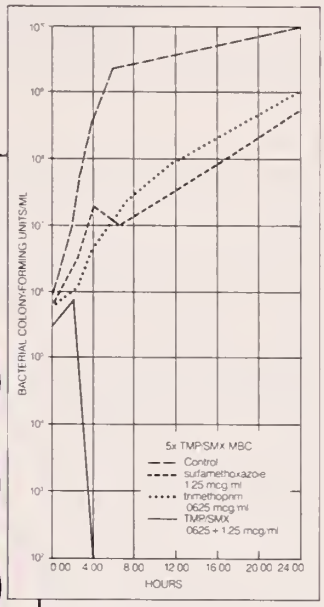
Bactericidal activity with minimal resistance

Percent of isolates of common uropathogens sensitive to BACTRIM and to other antimicrobials

	Escherichia coli	*Klebsiella pneumoniae*	*Proteus mirabilis*	*Proteus vulgaris*	*Proteus sp.*	*Enterobacter sp.*	*Enterobacter aerogenes*	*Enterobacter cloacae*
BACTRIM	96% (328,598)	89% (63,551)	93% (62,691)	84% (4174)	91% (4381)	88% (1736)	96% (7326)	92% (11,856)
ampicillin	72% (345,209)	5% (65,466)	85% (67,338)	16% (4381)	70% (4402)	10% (1775)	9% (7759)	11% (12,091)
cephalexin†	81% (343,339)	85% (67,031)	92% (67,027)	16% (4398)	80% (4365)	22% (1834)	13% (7571)	12% (11,846)
nitrofurantoin	97% (307,785)	65% (61,162)	7% (59,775)	13% (3848)	14% (3059)	67% (1707)	60% (7109)	67% (10,830)

†Analogous to cephalothin, the primary antibiotic disc used in testing.
Source: The Bacteriologic Report, BAC-DATA Medical Information Systems, Inc., Winter Series, 1981-82.
Numbers under percentages refer to the projected number of isolates tested.

RAPID *IN VITRO* DESTRUCTION OF *E. COLI*•



Kill curve kinetics of Bactrim and its individual components against *E. coli in vitro*.[1]

The bactericidal action of Bactrim has been demonstrated *in vitro* on laboratory strains of *E. coli*[1,2] and on clinical isolates of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis* and *Morganella morganii*[3]—the most common causative organisms of urinary tract infections.[4] More than 100 published studies attest to the efficacy of Bactrim in recurrent urinary tract infections due to these organisms.[5] In comparative studies with other antimicrobials, Bactrim has consistently demonstrated unsurpassed efficacy during therapy.[6-11]

Resistance to Bactrim develops more slowly than to either of its components alone *in vitro*.* Among urinary tract isolates, resistance has rarely emerged in susceptible strains.[5,12] Bactrim is contraindicated in pregnancy at term, during lactation, in infants less than two months old and in documented megaloblastic anemia due to folate deficiency.

Initial episodes of uncomplicated urinary infections should be treated with a single-agent antimicrobial.

Bactrim™ DS

(trimethoprim and sulfamethoxazole/Roche)

b.i.d. *for recurrent urinary tract infections*

**In vitro* data do not necessarily predict clinical results.

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See next page for references and a summary of product information.

References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ **2.** Kramer MJ, Maurız YR, Robertson TL, Timmes MD: Morphological studies on the effect of subinhibitory and inhibitory doses of sulfamethoxazole-trimethoprim combination on *Escherichia coli*. Presented at the 12th International Congress of Chemotherapy, Florence, Italy, Jul 19-24, 1981. **3.** Spicehandler J *et al: Rev Infect Dis* 4:562-565, Mar-Apr 1982. **4.** Stamey TA: *Pathogenesis and Treatment of Urinary Tract Infections*. Baltimore, Williams & Wilkins, 1980, p. 13. **5.** Ronald AR: *Clin Ther* 3:176-189, Mar 1980. **6.** Cooper J, Brumfitt W, Hamilton-Miller JMT: *J Antimicrob Chemother* 6:231-239, 1980. **7.** Gower PE, Tasker PRW: *Br Med J* 1:684-686, Mar 20, 1976. **8.** Cosgrove MD, Morrow JW: *J Urol* 111:670-672, May 1974. **9.** Iravani A *et al: Antimicrob Agents Chemother* 19:598-604, Apr 1981. **10.** Schaeffer AJ, Flynn S, Jones J: *J Urol* 125:825-827, Jun 1981. **11.** Rous SN: *J Urol* 125:228-229, Feb 1981. **12.** BAC-DATA Medical Information Systems, Inc., Bactenologic Reports, Winter Senes, 1976-82.

Bactrim™ DS

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, hepatocellular necrosis, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients. *Pregnancy:* Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, hepatocellular necrosis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: *Not recommended for infants less than two months of age.*

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS:

Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets*, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per tea spoonful (5 ml); fruit-liconce flavored—bottles of 16 oz (1 pint).

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

References:
1. Stone PH, Turi ZG, Muller JE: Efficacy of nifedipine therapy for refractory angina pectoris. *Am Heart J* 104:672-681, September 1982
2. Antman E, Muller J, Goldberg S, et al: Nifedipine therapy for coronary-artery spasm: Experience in 127 patients. *N Engl J Med* 302:1269-1273, June 5, 1980

BRIEF SUMMARY

PRDCARDIA® (nifedipine) **CAPSULES** For Oral Use

INDICATIONS AND USAGE: I. Vasospastic Angina: PRDCARDIA (nifedipine) is indicated for the management of vasospastic angina confirmed by any of the following criteria: 1) classical pattern of angina at rest accompanied by ST segment elevation, 2) angina or coronary artery spasm provoked by ergonovine, or 3) angiographically demonstrated coronary artery spasm. In those patients who have had angiography the presence of significant fixed obstructive disease is not incompatible with the diagnosis of vasospastic angina, provided that the above criteria are satisfied. PROCARDIA may also be used where the clinical presentation suggests a possible vasospastic component but where vasospasm has not been confirmed, e.g., where pain has a variable threshold on exertion or in unstable angina where electrocardiographic findings are compatible with intermittent vasospasm, or when angina is refractory to nitrates and/or adequate doses of beta blockers.

II. Chronic Stable Angina (Classical Effort-Associated Angina): PRDCARDIA is indicated for the management of chronic stable angina (effort-associated angina) without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or organic nitrates or who cannot tolerate those agents.

In chronic stable angina (effort-associated angina) PRDCARDIA has been effective in controlled trials of up to eight weeks duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in those patients are incomplete.

Controlled studies in small numbers of patients suggest concomitant use of PRDCARDIA and beta blocking agents may be beneficial in patients with chronic stable angina, but available information is not sufficient to predict with confidence the effects of concurrent treatment, especially in patients with compromised left ventricular function or cardiac conduction abnormalities. When introducing such concomitant therapy care must be taken to monitor blood pressure closely since severe hypotension can occur from the combined effects of the drugs. (See Warnings.)

CONTRAINDICATIONS: Known hypersensitivity reaction to PRDCARDIA.

WARNINGS: Excessive Hypotension: Although in most patients, the hypotensive effect of PRDCARDIA is modest and well tolerated, occasional patients have had excessive and poorly tolerated hypotension. These responses have usually occurred during initial titration or at the time of subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta blockers.

Severe hypotension and/or increased fluid volume requirements have been reported in patients receiving PRDCARDIA together with a beta blocking agent who underwent coronary artery bypass surgery using high dose fentanyl anesthesia. The interaction with high dose fentanyl appears to be due to the combination of PRDCARDIA and a beta blocker, but the possibility that it may occur with PRDCARDIA alone, with low doses of fentanyl, in other surgical procedures, or with other narcotic analgesics cannot be ruled out. In PROCARDIA treated patients where surgery using high dose fentanyl anesthesia is contemplated, the physician should be aware of these potential problems and, if the patient's condition permits, sufficient time (at least 36 hours) should be allowed for PRDCARDIA to be washed out of the body prior to surgery.

Increased Angina: Occasional patients have developed well documented increased frequency, duration or severity of angina on starting PRDCARDIA or at the time of dosage increases. The mechanism of this response is not established but could result from decreased coronary perfusion associated with decreased diastolic pressure with increased heart rate, or from increased demand resulting from increased heart rate alone.

Beta Blocker Withdrawal: Patients recently withdrawn from beta blockers may develop a withdrawal syndrome with increased angina, probably related to increased sensitivity to catecholamines. Initiation of PRDCARDIA treatment will not prevent this occurrence and might be expected to exacerbate it by provoking reflex catecholamine release. There have been occasional reports of increased angina in a setting of beta blocker withdrawal and PRDCARDIA initiation. It is important to taper beta blockers if possible, rather than stopping them abruptly before beginning PRDCARDIA.

Congestive Heart Failure: Rarely, patients, usually receiving a beta blocker, have developed heart failure after beginning PROCARDIA. Patients with tight aortic stenosis may be at greater risk for such an event.

PRECAUTIONS: General: Hypotension: Because PROCARDIA decreases peripheral vascular resistance, careful monitoring of blood pressure during the initial administration and titration of PRDCARDIA is suggested. Close observation is especially recommended for patients already taking medications that are known to lower blood pressure. (See Warnings.)

Peripheral edema: Mild to moderate peripheral edema, typically associated with arterial vasodilation and not due to left ventricular dysfunction, occurs in about one in ten patients treated with PRDCARDIA. This edema occurs primarily in the lower extremities and usually responds to diuretic therapy. With patients whose angina is complicated by congestive heart failure, care should be taken to differentiate this peripheral edema from the effects of increasing left ventricular dysfunction.

Drug interactions: Beta-adrenergic blocking agents (See Indications and Warnings.) Experience in over 1400 patients in a non-comparative clinical trial has shown that concomitant administration of PRDCARDIA and beta-blocking agents is usually well tolerated, but there have been occasional literature reports suggesting that the combination may increase the likelihood of congestive heart failure, severe hypotension or exacerbation of angina.

Long-acting nitrates: PRDCARDIA may be safely co-administered with nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.

Digitalis: Administration of PRDCARDIA with digoxin increased digoxin levels in nine of twelve normal volunteers. The average increase was 45%. Another investigator found no increase in digoxin levels in thirteen patients with coronary artery disease. In an uncontrolled study of over two hundred patients with congestive heart failure during which digoxin blood levels were not measured, digitalis toxicity was not observed. Since there have been isolated reports of patients with elevated digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing PRDCARDIA to avoid possible over- or under-digitalization.

Carcinogenesis, mutagenesis, impairment of fertility: When given to rats prior to mating, nifedipine caused reduced fertility at a dose approximately 30 times the maximum recommended human dose.

Pregnancy: Category C. Please see full prescribing information with reference to teratogenicity in rats, embryotoxicity in rats, mice and rabbits, and abnormalities in monkeys.

ADVERSE REACTIONS: The most common adverse events include dizziness or light-headedness, peripheral edema, nausea, weakness, headache and flushing each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%. Syncopal episodes did not recur with reduction in the dose of PRDCARDIA or concomitant antianginal medication. Additionally the following have been reported: muscle cramps, nervousness, dyspnea, nasal and chest congestion, diarrhea, constipation, inflammation, joint stiffness, shakiness, sleep disturbances, blurred vision, difficulties in balance, dermatitis, pruritus, urticaria, fever, sweating, chills, and sexual difficulties. Very rarely introduction of PRDCARDIA therapy was associated with an increase in anginal pain, possibly due to associated hypotension.

In addition, more serious adverse events were observed, not readily distinguishable from the natural history of the disease in these patients. It remains possible, however, that some or many of these events were drug related. Myocardial infarction occurred in about 4% of patients and congestive heart failure or pulmonary edema in about 2%. Ventricular arrhythmias or conduction disturbances each occurred in fewer than 0.5% of patients.

Laboratory Tests: Rare, mild to moderate transient elevations of enzymes such as alkaline phosphatase, CPK, LDH, SGOT, and SGPT have been noted, and a single incident of significantly elevated transaminases and alkaline phosphatase was seen in a patient with a history of gall bladder disease after about eleven months of nifedipine therapy. The relationship to PRDCARDIA therapy is uncertain. These laboratory abnormalities have rarely been associated with clinical symptoms. Cholestasis, possibly due to PRDCARDIA therapy, has been reported twice in the extensive world literature.

HOW SUPPLIED: Each orange, soft gelatin PRDCARDIA CAPSULE contains 10 mg of nifedipine. PRDCARDIA CAPSULES are supplied in bottles of 100 (NDC 0069-2600-66), 300 (NDC 0069-2600-72), and unit dose (10x10) (NDC 0069-2600-41). The capsules should be protected from light and moisture and stored at controlled room temperature 59° to 77°F (15° to 25°C) in the manufacturer's original container.

More detailed professional information available on request

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"I can do things that I couldn't do for 3 yrs. including joining the human race again."



Quotes from an unsolicited letter received by Pfizer from an angina patient. While this patient's experience is representative of many unsolicited comments received, not all patients will respond to Procardia nor will they all respond to the same degree.

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"My daily routine consisted of sitting in my chair trying to stay alive."

"My doctor switched me to PROCARDIA[*] *as soon as it became available. The change in my condition is remarkable."*

"I shop, cook and can plant flowers again."

"I have been able to do volunteer work...and feel needed and useful once again."

PROCARDIA can mean the return to a more normal life for your patients—having fewer anginal attacks,[1] taking fewer nitroglycerin tablets,[2] doing more, and being more productive once again.

Side effects are usually mild (most frequently reported are dizziness or lightheadedness, peripheral edema, nausea, weakness, headache and flushing, each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%).



for the varied faces of angina

PROCARDIA®
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*Procardia is indicated for the management of:
1) Confirmed vasospastic angina.
2) Angina where the clinical presentation suggests a possible vasospastic component.
3) Chronic stable angina without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or nitrates or who cannot tolerate these agents. In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks' duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.

Please see PROCARDIA *brief summary on adjoining page.*

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J-9043-4 July 1981

Book Reviews

Review of Medical Physiology

W. F. Ganong
11th Edition, 1983
643 pages

Several decades have passed and many medical students have embraced this book, grateful for its guidance through medical physiology. Dr. Ganong—single handedly—has reviewed this ever evolving field, updating the past material and injecting the new. Despite the fact that we do not expect any one person to be competent in all parts of such a complex field, Dr. Ganong seems to be an ecumenical scholar.

Mostly mammalian physiology is discussed, though some invertebrates examples are used. Also a basic understanding of biochemistry, anatomy and chemistry are expected and not reviewed, a definite bias to the graduate student level.

An introduction is used to set the rules and select the jargon. Subsequently the neuromuscular system is discussed throughout at least 30% of the book. Following this is another large section dedicated to endocrinology and metabolism which is particularly rich in illustrations and tables. In fact nothing is spared in the visual demonstration of the text contents. In lieu of photography the reader has instead excellent drawings with which to relate to the written material. Graphs, tables and handy formulas dot the landscape, a respite from the endless lines.

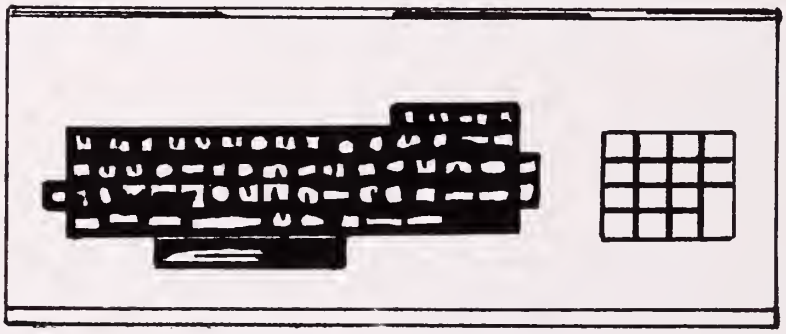
Gastrointestinal, circulatory, respiratory and urinary physiology are finally presented staccato, reflecting a common practice in medical school basic science courses—leaving the immediately applicable, clinically related material to subsequent exposure at the patient care level. Nevertheless reviewing these last sections with that experience has been elucidating.

An appendix gives a lexicon, both foreign and domestic, equivalence tables, and other extras. Even front and back covers are used for information.

Healthy as it is for the mind, this review of physiology will always be taxing for most of us, but at least with a Ganong it will be palatable.

Stephen Z. Smith, M.D.
Assistant Scientific Editor

PRACTICE MANAGEMENT



Installation

The final preparations should now be underway, and based on your contract negotiations, you should have a target date for your system to be installed. To assist you with an easy transition, I have divided this process into the following steps:

Site Preparation

The days of strict environmental controls for computer operations has become passé. The micro and mini computers have a higher tolerance both in temperature and humidity. It is not as important as to how cool to maintain the system but that it is maintained in an area that has a steady temperature and humidity. Rapid changes will cause disruptions. If you decide to place the system in a small room, make sure there is adequate ventilation. Circulation of the air alone will usually drop the temperature several degrees. The small micro and some of the new minis can be utilized without special environmental conditions. You may wish to invest in an inexpensive barometer and thermometer so you can regularly check these items.

When locating the equipment in your office, position the system and its terminals and printers away from the main isles with all cables either located under the floor or in the ceiling. Do not leave the cable lying out because it could be damaged and cause a number of problems. Also make certain all cables are clear of any power cables. The printer should be in a convenient place, and if at all possible located in a small ventilated room, or used with an acoustical cover to reduce noise.

Determine what specific wiring you may require. In the case of a micro or small mini, standard electrical outlets will be needed. You may wish to invest in a designated line for computer operations. This line is separated from those providing service to your x-ray, copier and other major energy using equipment. The power surge these items generate may cause problems with your system. However, before you invest in new wiring, test your system with several weeks of operation. If a problem develops, then make the necessary adjustments. Major vendors such as IBM, DIGITAL, WANG and NCR will have environmental engineers available to study your site and make recommendations. They usually will only review large system installations but you may be able to obtain a "fact sheet" or a list of items to be aware of in preparing your site for installation.

Another problem that may occur is static electricity, particularly if your system is located on carpeting. A single static charge sent into the computer by simply touching it can cause data to be corrupted or lost. To

avoid this, place an anti-static mat under the computer or spray the carpet with an anti-static solution. An inexpensive solution can be made from one part fabric softener to 10 parts water. Applied to carpet after each vacuuming should avoid static. Areas surrounding terminals and printers should also be treated as similar problems could occur. Tile or wood floors offer the best conditions.

Should your system have a communications option, you will need to arrange for the installation of the appropriate phone link up. Many physicians' offices maintain a separate private line for personal calls and other use. This separate line would be an ideal link for communications. You must use a non "search and seek" line which is utilized in most offices. Therefore a separate phone line will be needed to enable the telecommunications and rapid access to other data bases, ongoing software support, and networking capabilities.

Supplies

Review your contract to see what items are included with your system and what additional supplies are needed. Most systems will include a minimum of supplies mainly for use during installation. You will need to determine the minimum quantities you will need and the vendor should be able to assist you. Supplies to consider are:

Storage Media—Are you using hard disk, floppy diskettes or a combination of both? How many copies of backup (additional copies of your data files for off-line storage) will you desire? How much off-line storage do you anticipate? You should plan on having dual backup of all files besides a separate copy backed up weekly to store off site, for example in a bank or at your home.

Printers—type and maximum capacity of ribbons. If letter quality printer, type (style of print), fonts (character types). Type of paper the printer utilizes (precut forms or pin-feed). Can you use a precut sheet feeder?

Paper—order forms arranged in continuous pin-feed format. The turnaround time on ordering is usually six to eight weeks. If your printer supports a precut form (single sheet feeder) then you may not need the continuous feed paper because this additional device can load your current stationery into the printer. Order the appropriate insurance claim forms and other forms.

Support Equipment—cabinets to store supplies and computer backup media. Terminal and printer stands should you decide not to locate these on a table or a desk. Extra cables for locating terminals or printers at greater distances from the system.

Remember that it will take six to eight weeks to secure the supplies and support equipment you will need for your computer operations. Significant thought should be given to this subject. You need not order large quantities at this point but sufficient materials to meet your first three months of operation. Again, the vendor should be helpful with this.

Install Equipment

To avoid confusion during the installation of the equipment, determine the amount of time it will take to do it. If lengthy, see if this operation can be done during nonbusiness hours. At this point, at least one member of your staff should have had some basic training and should be available to observe and provide assistance. Plan on several weeks for your staff to become familiar with the system and its operation. Set a schedule of implementation of changeover to automation. It is necessary to provide this schedule to ensure a progressive and timely changeover. A nonstructured changeover could result in lost time and employee apathy.

No matter how small the system is, it is advisable to have the vendor's staff set the system up. Therefore, if there are any problems you can immediately have the vendor remedy the situation. If you do the installation yourself and something goes wrong, or the unit was damaged in shipping and not immediately detectable, you could be responsible for the unit and void the warranty. Installation is an added cost to your purchase, but it is minimal to ensure smooth startup of operations. You are in a stronger position for prompt service and even replacement of the device if it is faulty. Another advantage of utilizing the vendor's installation service is that it can be a training experience for your key staff. By observing the installation and questioning the installer, you will obtain additional insight into potential minor problems that can be quickly resolved in-house. An example would be a power failure that crashes your system. "Crash" is used to denote the condition of the computer when power is removed without taking the appropriate steps to remove your programs from memory and remove to storage the files currently being used. Depending on what caused the crash may determine how you bring the system back up. You should have the installer or the vendor demonstrate the procedures for recovering

from a crash. Other items as to the location of switches and what they control should be discussed with the installer. Also a basic list of "do's" and "don'ts" should be obtained.

Conversion Manuel To Computer

The conversion of your files can be a smooth operation if a comprehensive plan of implementation has been drafted. This document does not have to be a detailed dissertation but an outline with notes to further explain the process. This plan should include the following information: 1) How much support will the vendor be providing? 2) Will you need extra part-time staff to handle the conversion? 3) Will it have to be done during nonbusiness hours? and 4) How much time can be devoted by staff to this task? Your plan of implementation should also have a time table built into it. Although you may not be able to adhere to this time element, it provides your staff with a goal to reach.

The applications determined during your systems analysis should now be established. The most important job for the practice should be undertaken first. This application should be installed and functional before proceeding to the next application. When working with accounting applications, plan to run a parallel system (manual and automated) for at least three months. Make sure to set a termination date for the manual system to be stopped. If you do not adhere to this schedule your staff will continue to use both systems which would be counter productive and not cost effective. During the parallel period, run occasional audits on the system to ensure the quality of the work performed.

During the conversion period notify your patients of the changeover and the need for their patience and cooperation. This period of time will require a lot of trial and error learning that will require tolerance on all personnel involved. Also note that you should plan on having minor problems with the hardware during the first 90 days of operation. The first 90 days should be considered as the break-in period, not only for hardware but software and also for your staff.

The key staff person on your system should now be coordinating your automation efforts. If the vendor has agreed to provide a certain number of days, get them to divide that time to offer an introduction to the system and then have them come back after several weeks or a month to give additional training. This break in the training will provide time for the staff to become familiar with the system and develop questions based on actual application instead of generalities that would be taught in a few days of initial on-site training. If the vendor does not provide this as part of the contract, will they be available for additional on-site training or at least have classes available for advanced training. Your staff should have access to advanced training to maximize the use of your system.

Anticipate some resistance. After all, this is a major change to your operating procedure. Reduce fears in employees of job replacement and job charges by reinforcing them with encouragement and an explanation of your goals. Stress the team effort and the need to pull together.

Operation

The system is now operating and your software is installed. Data is being input and your staff is gearing up for the final stages in completing this task when the system goes down. Have you established a protocol to handle this situation. The majority of problems with computers are operator induced and can be resolved by the key operator. The key operator should be contacted immediately to review the situation and determine whether he/she can resolve the problem or whether it is a problem that will have to be resolved by the vendor.

The system will include reference manuals that should be consulted before contacting the vendor. If you have ongoing support, you could now contact the vendor and have them resolve the problem. When seeking outside support, have the key operator or system manager make the calls (unless unavailable.)

Use a logical approach to evaluating problems and trace the steps that cause them and how you may bypass the problem. A checklist of most commonly seen problems and their solutions should be developed. Most manufacturers provide reference materials on errors or problems that may develop. This could be used as the beginning of a bigger list. Other system operators and the vendor can help you with problems based on their personal experience. As the old saying goes "Learn from the mistakes of others because you do not have time to make them all yourself." As mentioned, hardware problems will account for less than 5% of your total problems. The rest of the errors or problems will revolve around the software and mainly reflect operator error.

In conclusion, develop a plan of implementation

and execute it on a prescribed time schedule. Support your staff with structured training and time to implement your schedule. Be enthusiastic and supportive. Finally, develop an ongoing evaluation of the system. Talk to staff about the needs and your expectations of them and the system. Review your contract to make sure that all items have been satisfactorily completed. Also review your practice goals and determine how they may have changed or how other procedures in your office could be automated. Use your systems analysis as a guide to your long range planning for growth and expression. Good Luck.

This is the seventh in a series of articles by Joe Witherington, Jr., System Manager for KMA and KMIC.

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MAXIGESIC capsules provide excellent relief of acute pain with predictable patient response. Potent, but without aspirin complications. Each capsule contains the analgesics Codeine 32mg and Acetaminophen 325mg plus 6.25mg of Promethazine to help relieve the anxiety and tension often accompanying pain. MAXIGESIC C-III status permits telephoned prescriptions and authorizes refills up to 5 times in 6 months (unless restricted by state law).

CONTRAINDICATIONS: Hypersensitivity to Codeine-containing preparations, the potential for abuse and dependence may occur. Administration is not recommended over an extended period. In ambulatory patients, Codeine may impair mental and/or physical abilities.

Interaction with other CNS depressants (anesthetics, tranquilizers, sedatives) may exhibit additive CNS depression.

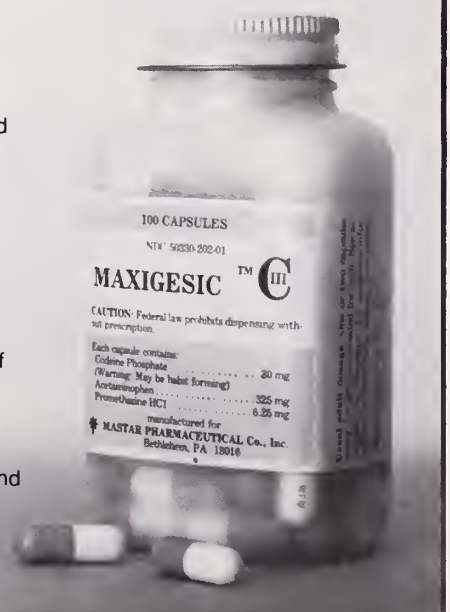
Usage in Pregnancy: Safe use has not been established in pregnant women.

Pediatric Use: Should not be administered to children under 12.

PRECAUTIONS: Increased cranial pressure may occur in presence of head injury. Promethazine should be administered cautiously to patients with cardio-vascular or liver disease. Acute abdominal conditions may be obscured. The drug should be given with caution to the elderly or debilitated, and those with severe impairment of hepatic and renal function, hyperthyroidism, Addison's disease and protatic hypertrophy or urethral stricture.

ADVERSE REACTIONS: The most frequently observed reactions include dizziness, lightheadedness, sedation nausea, vomiting and constipation.

DOSAGE AND ADMINISTRATION: Dosage should be adjusted to severity of pain, and the response of the patient. The usual dose is in one or two capsules every 4 to 6 hours as required.



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Construction Work Is Completed At KMA Headquarters Building



The KMA Insurance Agency's 10,000 square foot addition to the KMA headquarters building was completed in August. The Kentucky State Board of Medical Licensure and KMA offices occupy the downstairs addition. The upstairs houses the Kentucky Medical Insurance Company and newly established KMA Physician Financial Services, A Federal Credit Union. This entire project was financed by the KMA Insurance Agency, Inc., without cost to KMA.

Highlights of the 13th Annual EMCS



George R. Nichols, II, M.D., (left) Chief Medical Examiner for Kentucky talks with E. Truman Mays, M.D., Chairman of the Emergency Medical Care Committee.

More than 400 people attended the 1983 Emergency Medical Care Seminar, June 14, 15, and 16 at the Executive West, Louisville. Sponsored by the KMA Emergency Medical Care Committee, the program offered presentations on the themes of Pediatric Emergencies, Pre-hospital Care and Psychiatric Emergencies, as continuing education credits. Afternoons were devoted to manual skills workshops on Hepatitus B, traction splints and immediate care of the compound fracture and the Louisville Fire Department offered simulated emergency situations involving extraction techniques. Guest luncheon speakers during the Seminar were George R. Nichols, II, M.D. who spoke on Child Abuse and Louis M. Flint, M.D., Louisville who spoke on Organizing for Trauma Care.



Extrication techniques were demonstrated by the Louisville Fire Department.



Air ambulances from Jewish Hospital and Humana University Hospital were on display during the seminar.

Corrections

In the list of AMA delegates published in the August *Journal of KMA*, Lee C. Hess, M.D., was inadvertantly omitted. Doctor Hess was appointed interim delegate by the KMA Board of Trustees in December 1982 after KMA was authorized an additional delegate because of increased membership. Doctor Hess has been an active member of the KMA, having served as President in 1973. He was a member of the KMA House of Delegates from 1958-1965; a member of the KMA Board of Trustees from 1966-1977, serving as Chairman of the Board from 1969-1971. Doctor Hess has served as Alternate Delegate to the AMA since 1976. He is a 1956 graduate of the University of Louisville School of Medicine and is a family practitioner in Florence.

James B. Holloway, Jr., M.D., will be installed as President of the Kentucky Medical Association at the President's Luncheon on Wednesday, September 21, during the KMA Annual Meeting.

The August *Journal of KMA* incorrectly stated that Doctor Holloway would be installed as President-Elect.



Lee C. Hess, M.D.

Proposed Dues Increase

After having gone longer than any other state medical association without a dues increase—eight years—the House of Delegates will vote on a proposed increase of $75 at the Annual Meeting in Louisville. The dues increase proposal would change annual dues of Regular Members from $225 to $300.

Budget Committee Chairman, Ballard W. Cassady, M.D., Pikeville, noted that "it would be fiscally irresponsible for KMA not to effect the dues increase at this time." In making his recommendations, he praised the officers and staff for being able to delay an increase until this year as a result of the prudent management of funds. The Executive Committee and Board of Trustees have studied the report of the Budget Committee and have unanimously recommended approval of the proposal to the House of Delegates.

In Memoriam

Col. Frank R. Camp, Jr. 1919-1983

Col. Frank R. Camp, former director Louisville Regional Red Cross Blood Center, died of a rapidly destructive cancer on April 14, 1983.

Col. Camp long presented the strong combination in the best of a New England background and an academic education in one of the finest southern universities. His early years in Massachusetts were succeeded by his A.B. degree from Emory in 1948 and his M.S. from the same school in 1954. World War II initiated his productive career in the scientific investigation of blood transfusion, blood fractionation, and blood research. For 32 years he moved upward with progressive responsibility, scientific investigation, and leadership from Army hospitals through research institutions. Fortunately for Kentucky, the last decade of these military years was at the Fort Knox Army Medical Research Laboratory, which he directed and commanded.

His high technical interest in blood products and blood replacement was paralleled by a less well known commitment to genetics and social biology. He quietly sought to reduce man's suffering not only from blood loss but from various disadvantages which are inherited as well as acquired. While his neighborhood activities were fortunate for Louisville, he also presided over important sessions of international congresses as well as the more proximal American Association of Blood Banks. He served as a permanent advisory committee member to the National Heart and Lung Institute and in several committee chairmanships to the American Association of Blood Banks and the National Research Council, Division of Medical Sciences.

From 1954 until his death in 1983 he usually contributed several scientific observations for publication each year. Though technical advances were his staff of life, safety was a recurrent thread in all of his communications. Development and refinement of automation techniques were also essential in his managerial life. He trained a scholar's eye on historical backgrounds and a wary eye on forensic responsibilities. Without his work in preservation, cargo coding, and military transport of blood products, many an injured soldier of this nation and our allies would have perished.

Selected blood diseases also earned his attention and in the 1970's more than two dozen studies of molecular mechanisms in sickle cell disease appeared from his laboratories. Even such lowly items as the control of ink through plastic blood bags and such delicate items as typing in cases of disputed paternity earned his published analysis.

Preeminently he recognized the need for research as a matter of continuous training for service. He looked upon the military as one of the most pressing stimuli to the improvement of blood banking techniques.

Sketches of his life are permanently embedded in American Men of Science and the International Scholars Dictionary. In 1973 he received the Distinguished Service Award from the American Association of Blood Banks. He was an Honorary member of the Jefferson County Medical Society.

In Louisville he joined in support of teaching programs at Norton-Children's Hospitals, General Hospital, and the School of Medicine. He was quick to transfer military lessons to civilian use. He published approximately 175 scientific contributions to the literature plus 10 chapters in books or free standing monographs and brochures. He personally initiated the Marion F. Beard Seminars six years ago.

His first official retirement was from the U.S. Army in 1974. It was then that he became Scientific Director and Director of the Louisville Regional Red Cross Blood Center. His second official retirement was in 1980 from this Blood Center, but he continued to assist the Red Cross in lectures and planning. He and Mrs. Camp divided their time between Kentucky and Florida where they had just completed a second home this spring.

Most tragically cancer of the pancreas and liver, diagnosed only in March of this year, took a rapid course and he died April 14, 1983.

Though there have been no children in the Camp family to carry on the understanding, conscientious path created by the Colonel, literally thousands of unknown soldiers, sailors, airmen, and civilians truly live a tribute to his care.

(Presented at the 6th Annual Marion F. Beard Symposium Louisville, Kentucky, June 9, 1983)

Arthur H. Keeney, M.D.

IN MEMORIAM

AARON WAYNE LINVILLE, M.D.
Millersburg
1946-1983

Aaron Wayne Linville, M.D., a general practitioner from Bourbon County died June 3, 1983. He was a 1972 graduate of the University of Kentucky Medical School and had been a member of KMA since 1973.

COLEMAN C. JOHNSTON, M.D.
Lexington
1906-1983

Coleman C. Johnston, M.D., a retired surgeon, died June 13, 1983. Doctor Johnston had been a member of KMA since 1938, serving on the Advisory Committee to University of Kentucky, Advisory Committee to the Auxiliary and the Cancer Committee. Doctor Johnston was a Past President of the Fayette County Medical Society. Under his leadership the Kentucky Medical Education Foundation was established and he was instrumental in the development of the University of Kentucky School of Medicine. Doctor Johnston received his M.D. degree in 1933 from the University of Virginia.

MITCHEL B. DENHAM, M.D.
Maysville
1912-1983

Mitchel B. Denham, M.D., a general practitioner, political and civic leader, died July 12, 1983. Doctor Denham had been a member of KMA since 1942, serving on the Board of Trustees and Rural Health Committee. Doctor Denham was twice chosen as Kentucky citizen-doctor of the year by the Kentucky Academy of General Practice and was presented with a Distinguished Service Medal by the KMA for the compulsory immunization program he supported in state legislature. Doctor Denham received his M.D. degree in 1940 from the University of Louisville School of Medicine.

Postgraduate Page

SEPTEMBER

7-10 13th Annual Peripheral Vascular Disease Symposium, University Hilton Inn, Columbus, OH

19-22 KMA Annual Meeting, Ramada Inn/Bluegrass Convention Center, Louisville

OCTOBER

5-9 University of Mississippi Medical Center Workshop on Extremity and Spinal Joint Manual Therapy, Hoilday Inn Downtown, Jackson, Miss.

8-16 Eighth Annual International Body Imaging Conference, Maui Surf Hotel, Maui, Hawaii

13-14 Southern Medical Association, Medical Malpractice Seminar, Washington, D.C.

18 Bristol Memorial Hospital and Quillen-Dishner College of Medicine, Antimicrobial Therapy of Life Threatening Infections, Sullins Humanities Center, Bristol, Virginia.

19 East Tennessee State University, Quillen-Dishner College of Medicine, Pain Management, Johnston City, Tennessee

27-29 American Academy of Clinical Anesthesiologists, Quillen-Dishner College of Medicine, Anesthesiology Review Seminar, Gatlinburg, Tennessee.

NOVEMBER

4-5 Bethesda Hospital and Deaconess Association, Cincinnati Cancer Conference: G. I. Malignancies, The Westin Hotel, Cincinnati, OH

4-5 American Rheumatism Association, Central Region Meeting, Knickerbocker Hotel, Chicago, Illinois

4-5 Virginia Lung Association, Quillen-Dishner College of Medicine, Asthma, Martha Washington Inn, Abingdon, Virginia

6-9 Southern Medical Association, Regional Postgraduate Conferences, Baltimore, Maryland

6-9 Southern Medical Association, Annual Scientific Assembly, Baltimore, Maryland

9 Quillen-Dishner College of Medicine, The Management of Stress, Bristol, Tennessee

17-19 The Seventeenth Symposium on Philosophy and Medicine, Mercer University, Macon, Georgia.

DECEMBER

10-14 Departments of Otolaryngology & Pediatrics, University of Pittsburgh School of Medicine, The Tenth Annual Symposium, Ear, Nose and Throat Diseases in Children: A 1983 Update "Including the most recent results of the Pittsburgh and Boston studies of ear and sinus disease and tonsillectomy and adenoidectomy", The Breakers, Palm Beach, Florida



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There are other important benefits with Valium as well—along with its broad clinical range, Valium has an efficacy/safety profile that few, if any, drugs can match. This record has been achieved with extensive clinical experience, undoubtedly including yours. And, as you must have observed, side effects more serious than drowsiness, fatigue or ataxia rarely occur. Nevertheless, as with any CNS-acting agent, patients should be cautioned about driving, operating hazardous machinery or ingesting alcohol or other CNS-depressant drugs while taking Valium.

Yet another benefit Valium affords is flexibility. Available in 2-mg, 5-mg and 10-mg scored tablets, Valium enables you to titrate dosage to individual patient needs. For the geriatric patient, a starting dosage of 2 to 2½ mg once or twice a day is recommended. And, for patients who forget or skip medication, you can prescribe Valrelease™ (diazepam/Roche) 15-mg slow-release capsules, knowing that Valrelease will assure all the benefits of Valium 5 mg *t.i.d.* with the convenience of once-a-day dosage.

Discontinuation of Valium (or Valrelease) is typically as smooth as its start in short-term therapy. However, Valium and Valrelease should be discontinued gradually after more extended treatment. As you diminish dosage, the built-in tapering action of Valium and Valrelease will help avoid rapidly recurring anxiety symptoms and symptoms of withdrawal, and will help ease the patient's transition to independent coping when therapeutic goals have been achieved.

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Valium® (diazepam/Roche) Ⓝ Tablets
Valrelease™ (diazepam/Roche) Ⓝ slow-release Capsules
Injectable Valium® (diazepam/Roche) Ⓝ

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of anxiety disorders, or short-term relief of symptoms of anxiety. Anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic. Symptomatic relief of acute agitation, tremor, impending or acute delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: relief of skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome. *Oral forms* may be used adjunctively in convulsive disorders, but not as sole therapy. *Injectable form* may also be used adjunctively in: status epilepticus; severe recurrent seizures; tetanus; anxiety, tension or acute stress reactions prior to endoscopic/surgical procedures; cardioversion.

The effectiveness of diazepam in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindications: Tablets or capsules in children under 6 months of age; known hypersensitivity; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: As with most CNS-acting drugs, caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of predisposition to habituation/dependence.

***Usage in Pregnancy*: Use of minor tranquilizers during first trimester should almost always be avoided because their use is rarely a matter of urgency and because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

ORAL Advise patients against simultaneous ingestion of alcohol and other CNS depressants.

Not of value in treatment of psychotic patients; should not be employed in lieu of appropriate treatment. When using oral forms adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may be associated with temporary increase in frequency and/or severity of seizures.

INJECTABLE *To reduce the possibility of venous thrombosis, phlebitis, local irritation, swelling and, rarely, vascular impairment when used I.V.: inject slowly, taking at least one minute for each 5 mg (1 ml) given, do not use small veins, i.e., dorsum of hand or wrist; use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Injectable Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion*

Administer with extreme care to elderly, very ill, those with limited pulmonary reserve because of possibility of apnea and/or cardiac arrest; concomitant use of barbiturates, alcohol or other CNS depressants increases depression with increased risk of apnea, have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosage at least 1/3, administer in small increments. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs

Has precipitated tonic status epilepticus in patients treated for petit mal status or petit mal variant status. Not recommended for OB use.

Efficacy/safety not established in neonates (age 30 days or less); prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence; can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of diazepam, *i.e.*, phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function; avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed and tolerated).

The clearance of diazepam and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.

INJECTABLE Although promptly controlled, seizures may return; readminister if necessary; not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures; use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, observed in patients during and after diazepam therapy are of no known significance.

INJECTABLE Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia.

In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm/pain in throat or chest have been reported.

Dosage: Individualize for maximum beneficial effect.

ORAL *Adults:* Anxiety disorders, relief of symptoms of anxiety—Valium (diazepam/Roche) tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 Valrelease capsules (15 to 30 mg) daily. Acute alcohol withdrawal—tablets, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; or 2 capsules (30 mg) the first 24 hours, then 1 capsule (15 mg) daily as needed. Adjunctively in skeletal muscle spasm—tablets, 2 to 10 mg t.i.d. or q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily. Adjunctively in convulsive disorders—tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily.

Geriatric or debilitated patients: Tablets—2 to 2½ mg 1 or 2 times daily initially, increasing as needed and tolerated (see Precautions). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose.

Children: Tablets—1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use in children under 6 months). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose (not for use in children under 6 months)

INJECTABLE Usual initial dose in older children and adults is 2 to 20 mg I.M. or I.V., depending on indication and severity. Larger doses may be required in some conditions (tetanus). In acute conditions injection may be repeated within 1 hour, although interval of 3 to 4 hours is usually satisfactory. Lower doses (usually 2 to 5 mg) with slow dosage increase for elderly or debilitated patients and when sedative drugs are added. (See Warnings and Adverse Reactions.)

For dosages in infants and children see below; have resuscitative facilities available.

I.M. use: by deep injection into the muscle.

I.V. use: inject slowly, take at least one minute for each 5 mg (1 ml) given. Do not use small veins, i.e., dorsum of hand or wrist. Use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute Valium with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.

Moderate anxiety disorders and symptoms of anxiety, 2 to 5 mg I.M. or I.V., and severe anxiety disorders and symptoms of anxiety, 5 to 10 mg I.M. or I.V., repeat in 3 to 4 hours if necessary; acute alcohol withdrawal, 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary. Muscle spasm, in adults, 5 to 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary (tetanus may require larger doses); in children *administer I.V. slowly*; for tetanus in infants over 30 days of age, 1 to 2 mg I.M. or I.V., repeat every 3 to 4 hours if necessary; in children 5 years or older, 5 to 10 mg repeated every 3 to 4 hours as needed. Respiratory assistance should be available.

Status epilepticus, severe recurrent convulsive seizures (I.V. route preferred), 5 to 10 mg adult dose administered slowly; repeat at 10- to 15-minute intervals up to 30 mg maximum. Repeat in 2 to 4 hours if necessary, keeping in mind possibility of residual active metabolites. Use caution in presence of chronic lung disease or unstable cardiovascular status. Infants (over 30 days) and children (under 5 years), 0.2 to 0.5 mg slowly every 2 to 5 min., up to 5 mg (I.V. preferred). Children 5 years plus, 1 mg every 2 to 5 min., up to 10 mg (slow I.V. preferred); repeat in 2 to 4 hours if needed. EEG monitoring may be helpful.

In endoscopic procedures, titrate I.V. dosage to desired sedative response, generally 10 mg or less but up to 20 mg (if narcotics are omitted) immediately prior to procedure; if I.V. cannot be used, 5 to 10 mg I.M. approximately 30 minutes prior to procedure. As preoperative medication, 10 mg I.M.; in cardioversion, 5 to 15 mg I.V. within 5 to 10 minutes prior to procedure. Once acute symptomatology has been properly controlled with injectable form, patient may be placed on oral form if further treatment is required.

Management of Overdosage: Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure; employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension. Dialysis is of limited value.

How Supplied:

ORAL Valium scored tablets—2 mg, white; 5 mg, yellow; 10 mg, blue—bottles of 100 and 500; Prescription Paks of 50, available in trays of 10; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25 and in boxes containing 10 strips of 10.

Valrelease (diazepam/Roche) slow-release capsules—15 mg (yellow and blue), bottles of 100; Prescription Paks of 30.

INJECTABLE Ampuls, 2 ml, boxes of 10; Vials, 10 ml, boxes of 1. Tel-E-Ject® (disposable syringes), 2 ml, boxes of 10. Each ml contains 5 mg diazepam, compounded with 40% propylene glycol, 10% ethyl alcohol, 5% sodium benzoate and benzoic acid as buffers, and 1.5% benzyl alcohol as preservative.

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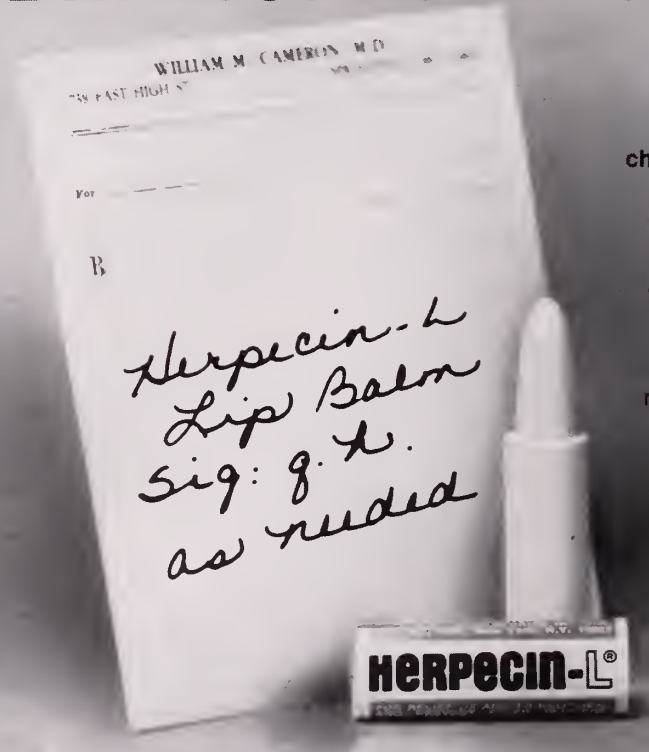
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- Contraindicated in patients who are pregnant or hypersensitive to flurazepam.
- Caution patients about drinking alcohol, driving or operating hazardous machinery during therapy.



References: 1. Kales A *et al: J Clin Pharmacol 17*:207-213, Apr 1977 and data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Kales A: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **4.** Kales A *et al: JAMA 241*:1692-1695, Apr 20, 1979. **5.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 15, 1978. **6.** Kales A *et al: Clin Pharmacol Ther 19*:576-583, May 1976. **7.** Kales A, Kales JD: *Pharmacol Physicians 4*:1-6, Sep 1970. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Dement WC *et al: Behav Med 5*:25-31, Oct 1978. **10.** Vogel GW: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **11.** Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington, DC, May 3-7, 1971. **12.** Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytime sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. **13.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

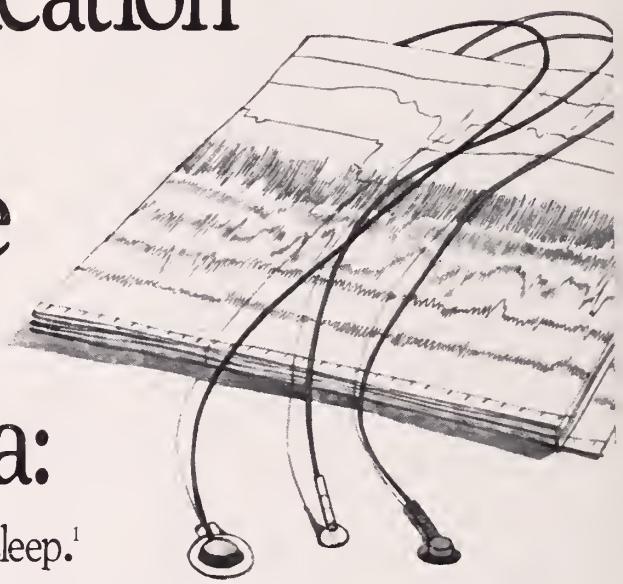
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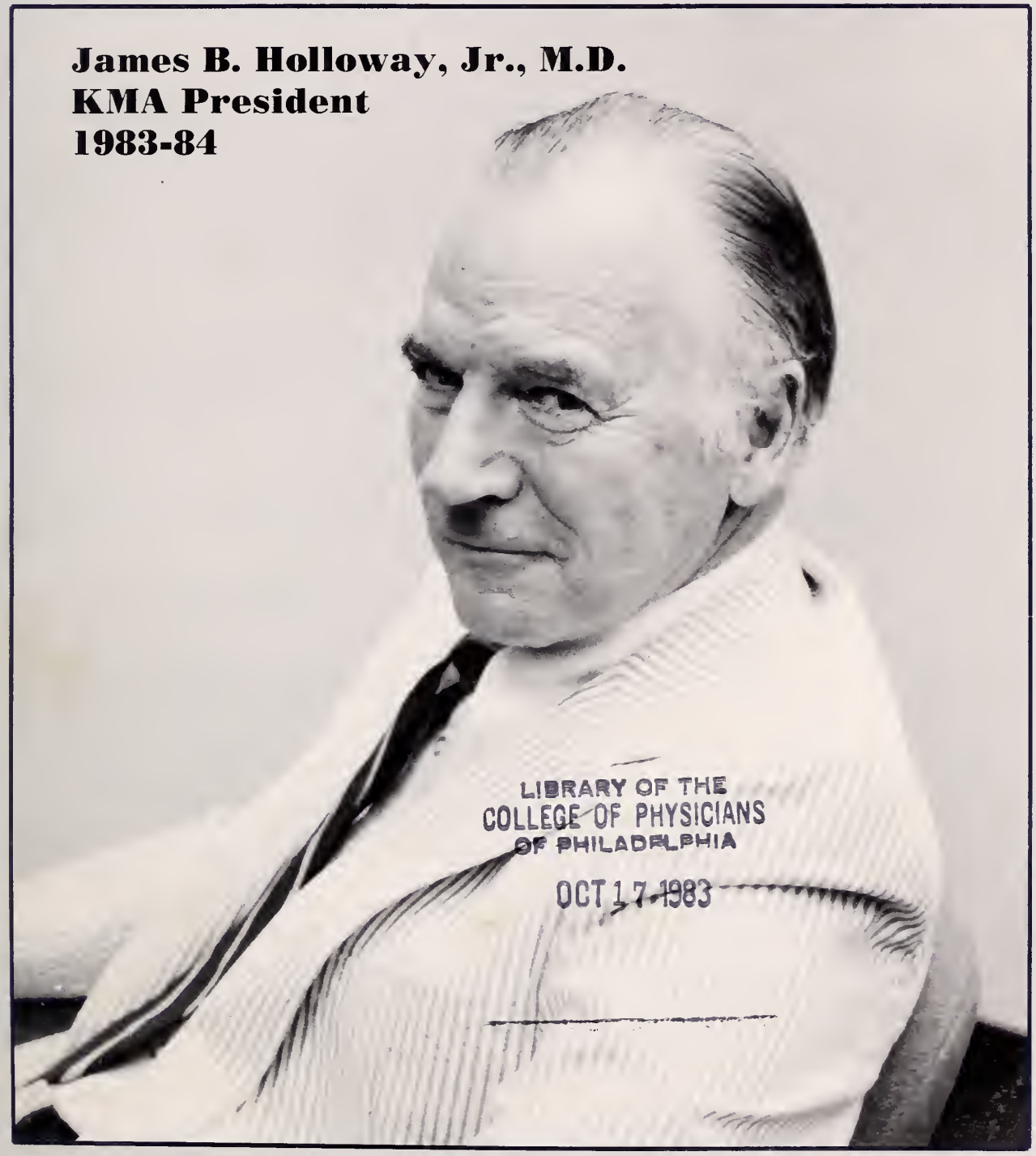
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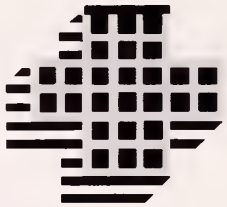
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10th	RICHARD F. HENCH, 2370 Nicholasville Road, Lexington 40503-606/277-6145	1985
11th	DON E. CLOYS, 634 Eastern Bypass, Richmond 40475-606/623-9113	1984
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13th	GARNER E. ROBINSON, 700-13th Street, Ashland 41101-606/324-6181	1985
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For elderly or debilitated patients, initial daily dosage should not exceed 2mg to avoid oversedation. Terminate dosage gradually since abrupt withdrawal of any antianxiety agent may result in symptoms like those being treated: anxiety, agitation, irritability, tension, insomnia and occasional convulsions. Observe usual precautions with impaired renal or hepatic function. Where gastrointestinal or cardiovascular disorders coexist with anxiety, note that lorazepam has not been shown of significant benefit in treating gastrointestinal or cardiovascular component. Esophageal dilation occurred in rats treated with lorazepam for more than 1 year at 6mg/kg/day. No effect dose was 1.25mg/kg/day (about 6 times maximum human therapeutic dose of 10mg/day). Effect was reversible only when treatment was withdrawn within 2 months of first observation. Clinical significance is unknown; but use of lorazepam for prolonged periods and in geriatrics requires caution and frequent monitoring for symptoms of upper G.I. disease. Safety and effectiveness in children under 12 years have not been established.

ESSENTIAL LABORATORY TESTS: Some patients have developed leukopenia; some have had elevations of LDH. As with other benzodiazepines, periodic blood counts and liver function tests are recommended during long-term therapy.

CLINICALLY SIGNIFICANT DRUG INTERACTIONS: Benzodiazepines produce CNS depressant effects when administered with such medications as barbiturates or alcohol.

CARCINOGENESIS AND MUTAGENESIS. No evidence of carcinogenic potential emerged in rats during an 18-month study. No studies regarding mutagenesis have been performed.

PREGNANCY: Reproductive studies were performed in mice, rats, and 2 strains of rabbits. Occasional anomalies (reduction of tarsals, tibia, metatarsals, malrotated limbs, gastroschisis, malformed skull and microphthalmia) were seen in drug-treated rabbits without relationship to dosage. Although all these anomalies were not present in the concurrent control group, they have been reported to occur randomly in historical controls. At 40mg/kg and higher, there was evidence of fetal resorption and increased fetal loss in rabbits which was not seen at lower doses. Clinical significance of these findings is not known. However, increased risk of congenital malformations associated with use of minor tranquilizers (chlordiazepoxide, diazepam and meprobamate) during first trimester of pregnancy has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, use of lorazepam during this period should almost always be avoided. Possibility that a woman of child-bearing potential may be pregnant at institution of therapy should be considered. Advise patients if they become pregnant to communicate with their physician about desirability of discontinuing the drug. In humans, blood levels from umbilical cord blood indicate placental transfer of lorazepam and its glucuronide.

NURSING MOTHERS: It is not known if oral lorazepam is excreted in human milk like other benzodiazepines. As a general rule, nursing should not be undertaken while on a drug since many drugs are excreted in milk.

Adverse Reactions, if they occur, are usually observed at beginning of therapy and generally disappear on continued medication or on decreasing dose. In a sample of about 3,500 anxious patients, most frequent adverse reaction is sedation (15.9%), followed by dizziness (6.9%), weakness (4.2%) and unsteadiness (3.4%). Less frequent are disorientation, depression, nausea, change in appetite, headache, sleep disturbance, agitation, dermatological symptoms, eye function disturbance, various gastrointestinal symptoms and autonomic manifestations. Incidence of sedation and unsteadiness increased with age. Small decreases in blood pressure have been noted but are not clinically significant, probably being related to relief of anxiety.

Overdosage: In management of overdosage with any drug, bear in mind multiple agents may have been taken. Manifestations of overdosage include somnolence, confusion and coma. Induce vomiting and/or undertake gastric lavage followed by general supportive care, monitoring vital signs and close observation. Hypotension, though unlikely, usually may be controlled with Levarterenol Bitartrate Injection U.S.P. Usefulness of dialysis has not been determined.

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Health and Safety Tip From the American Medical Association

MARKERS LISTED TO IDENTIFY ALCOHOLICS

How can you tell that a regular, heavy drinker has crossed over the line and become an alcoholic, who no longer can control his or her drinking?

The American Medical Association in its Manual on Alcoholism points to some markers to help identify the alcoholic.

1. Increasing consumption of alcohol, with frequent, perhaps unintended, episodes of intoxication.

2. Drinking to handle problems or relieve symptoms.

3. Obvious preoccupation with alcohol and the frequent need to have a drink.

4. Surreptitious drinking or gulping of drinks.

5. Tendency toward making alibis and weak excuses for drinking.

6. Refusal to concede what is obviously excessive consumption and expressing annoyance when the subject is mentioned.

7. Frequent absenteeism from the job, especially following weekends and holidays.

8. Repeated changes in jobs, particularly if to successively lower levels, or employment in a capacity beneath ability, education and background.

9. Shabby appearance, poor hygiene, and behavior and social adjustment inconsistent with previous levels or expectations.

10. Persistent vague physical complaints without apparent cause, particularly insomnia, stomach upsets, headaches, loss of appetite.

11. Multiple contacts with the health care system with disorders that are alcohol caused or related.

12. Persistent marital and family problems, perhaps with multiple marriages.

13. History of arrests for drunkenness or drunken driving.

Submitted by the KMA Impaired Physicians' Committee

PRESIDENT'S PAGE



ONE is supposed to start this page in the usual way in discussing humility, etc. I shall try to spare you all that prescribed nonsense. No one would have this job if they didn't want it. I have looked forward to it immensely and I only hope I can continue the sparkling and innovative job that your retiring President, Dwight L. Blackburn, M.D., has done. Dwight has given us so much momentum that I will be able to really sit back and not do much this year and you will think I have done a good job. We will certainly try to use his talents in the years to come in as many ways as we can. He is to be thoroughly and emphatically congratulated for his perfectly splendid year as "Captain of the Ship."

The Kentucky Medical Association has so many things going for it at this time that we should all indeed be thankful. The staff headed by Robert Cox, is probably unequaled in the country as evidenced by the terrific spinoffs that KMA has engineered in the last three or four years. The Kentucky Medical Insurance Company is doing a splendid job for the physicians of the state and will continue to do so during the coming years, due in a large measure to Carl Wedekind, our KMIC President, and Riley Lassiter, our Claims Manager and Vice President of Operations.

The formation of the KMA Physicians Financial Services, a Federal Credit Union, is going to be and can be of enormous benefit to every member of the Society. I urge you to take out the credit cards for you, yourself, your family, and your office staff. The interest rate you pay will be less. There will be no charge whatsoever for the first 25 days, and you will find the loan provisions are better than your local bank. Charles Crabtree, who headed up the Bell telephone credit union in Kentucky for 17 years, brings much experience as our General Manager and Chief Executive Officer.

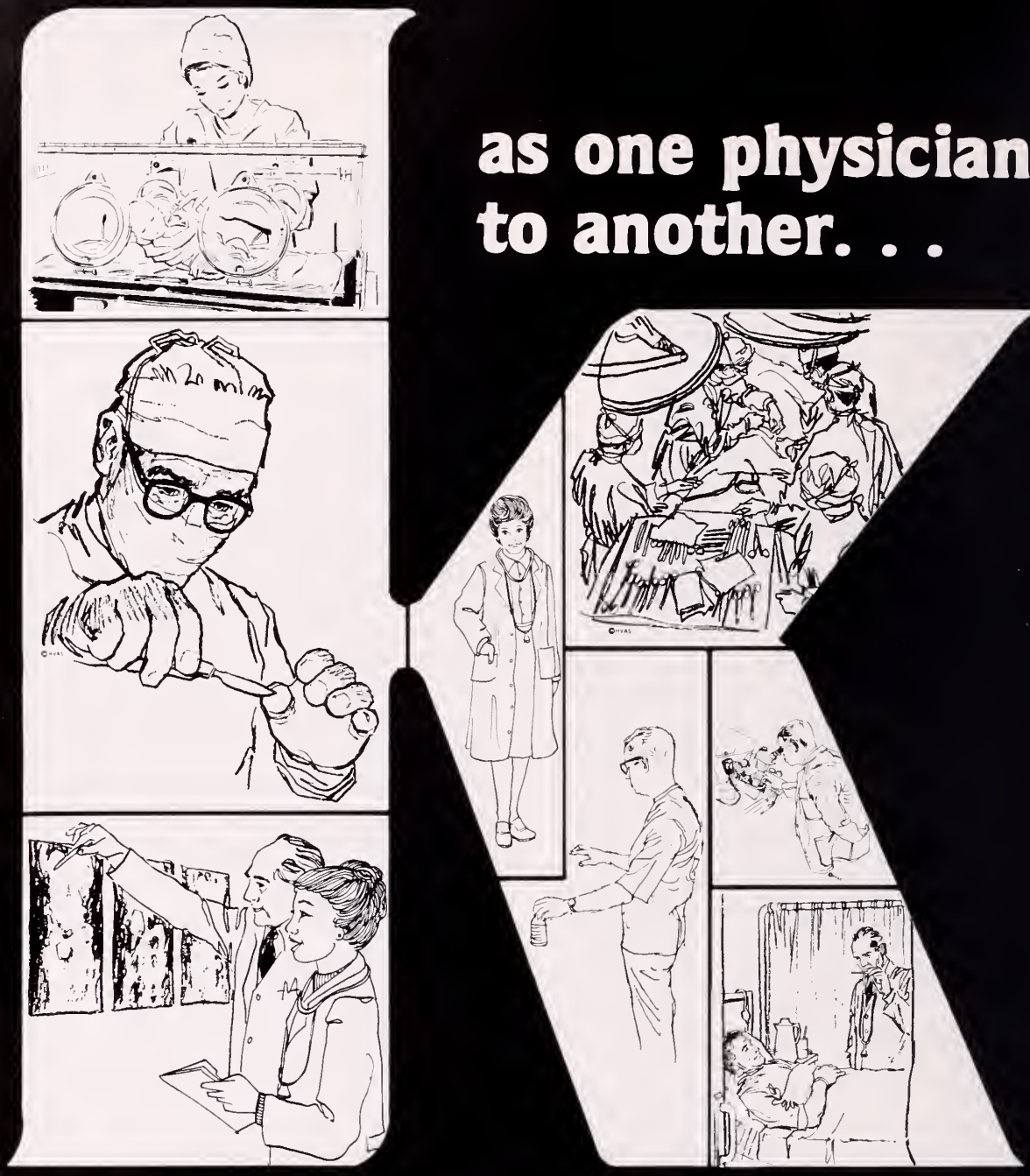
The inception of the computer company should get underway this year and has the possibility of providing great benefit to those people who need its services.

The thrust of this administration will be toward a recognition and a working partnership with the new administration in Frankfort. No effort will be spared to promote the interests of the Kentucky Medical Association and its component societies. We will do the very best we can to look after the interest of the various specialty groups working through the interspecialty council and the various committees of the Association. The membership must be apprised, however, that there are many special interest groups who are well organized and well financed whose interests are inimical to those of the Kentucky Medical Association. These people will be doing the best they can to take away our prerogatives, to promote their own interest to the detriment of our patient's welfare.

It should be noted that politicians have a tendency to overpromise what they can deliver. They tend to ignore the budget restrictions that the legislature is going to place on them. There is no hope that we are going to get any sort of reasonable compensation for our services in the next three or four years from any Kentucky administration or the legislature. Of course, the Federal government will continue in an adversary position. We shall do all we can to present a positive program to the state, to help you offer the best care available to our citizens, to give you whatever assistance we can. At the same time, we shall need your input, help, and advice.

I am sure I speak for all of the Board when I say we look forward to the coming year.

James B. Holloway, Jr., M.D.
KMA President



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Legionnaires' Pericarditis

RICARDO R. REYES, M.D. AND ROBERT C. NOBLE, M.D.

We report a case of Legionnaires' disease in a patient with metastatic carcinoma who was also taking corticosteroids in which **Legionella pneumophila** *serogroup I was isolated from pericardial fluid. To our knowledge, this has not been previously reported. Pericarditis should be considered as a part of Legionnaires' disease, especially in the immunocompromised host.*

LEGIONNAIRES' disease most commonly presents as a pneumonia with multi-system involvement. The organism is usually found in the lung but it has also been documented in other sites.[1-3] We report the occurrence of a fatal case of Legionnaires' disease in a compromised host in which the organism was isolated from pericardial fluid as well as from pulmonary secretions. (To our knowledge this has not been previously reported.)

Case Report

A 44-year-old white female with hypothyroidism was found to have a poorly differentiated adenocarcinoma of her right ovary in September 1981. A total abdominal hysterectomy and bilateral salpingo-oophorectomy was performed at another hospital. Further evaluation revealed evidence of tumor in a mass on her right hip, liver and lung.

In November 1981, an ataxic gait was noted and a CT Scan revealed a cerebellar mass. Because of symptoms of increased intracranial pressure, dexamethasone 4mg I.V. q6h was begun, and a craniotomy was performed. A metastatic, poorly differentiated adenocarcinoma of her right cerebellar hemisphere was excised. Postoperative care was complicated by an acute anteroseptal myocardial infarction. She received whole brain irradiation of 3000 rads over two weeks, and was sent home on propranolol, levathyroxine, dexamethasone, cimetidine, and aluminum and magnesium hydroxides.

She was readmitted two weeks later with a 12-hour history of headaches, fever, shaking chills, nausea, diarrhea, shortness of breath and a right pleuritic chest pain. On admission, she was lethargic with a blood pressure of 90/70 mm/Hg; pulse, 100/min; respiratory rate 24/min; and temperature 103°F. Signs of consolidation were present in her right upper lobe. A II/VI systolic ejection murmur was heard over left sternal border, but no rubs or gallops were heard. Her liver was palpable about three finger breadths below the right costal margin at the midclavicular line. Decreased motor strength was noted on the left side of her body. The rest of the physical exam was unremarkable.

Abnormal laboratory studies included: white blood count 1,800 per cu·mm with 71% neutrophiles, 7% bands, 9% lymphocytes, 4% monocytes and 8% metamyelocytes. The serum creatinine, electrolytes, glucose, creatinine phosphokinase, blood urea nitrogen, SGOT, phosphorus, platelet count, prothrombin time and partial thromboplastin time were all within normal limits. The blood pH was 7.55; pCO_2, 26.5 mm/Hg; and pO_2, 50.2 mm/Hg. Urinalysis revealed 20-30 RBCs per high powered field, occasional WBC's, but no protein. Gram stain of the sputum revealed a few gram-positive cocci in pairs and clusters and occasional gram-negative diplococci. Blood and urine cultures were negative. Sputum and stool cultures grew usual flora.

A right upper lobe consolidation and previous left lower lobe mass were present on the chest roentgenogram. The ECG showed sinus tachycardia with diffuse ST-T wave changes. There were marked T wave inversions in leads V3-V6 compatible with anterolateral subendocardial ischemia. Therapy was begun with penicillin G and gentamicin. The following day, a cough

developed productive of scant greenish sputum. Oral erythromycin was added to her therapy, but because of her failing respiratory condition, she was placed on a respirator. On the third hospital day her pneumonia worsened. Erythromycin was begun intravenously at 500 mg every six hours. A bronchoscopy was performed. Fungal, AFB and cytology smears as well as cultures were all negative. Direct fluorescent antibody examination of the secretions collected by brushing of the bronchi were negative, but *Legionella pneumophila* serogroup I grew on charcoal yeast medium seven days later. The indirect fluorescent antibody result for Legionella from the serum was <1:64 (acute). The complement fixation test for mycoplasma was 1:8.

The electrocardiogram showed electrical alternans suggestive of a pericardial effusion which was confirmed by an echocardiogram. A pericardiocentesis was performed obtaining only 1cc of serosanguinous fluid. A direct fluorescent antibody test of this material for Legionella was negative, but a culture grew *Legionella pneumophila* serogroup 1 a week later. The evening of the second day, the patient became severely hypotensive and bradycardic requiring large amounts of dopamine to sustain her blood pressure. She remained totally unresponsive from there on. On the fourth hospital day disseminated intravascular coagulation developed. Erythromycin was increased to 1 gm every six hours, and ticarcillin was begun. She continued to deteriorate with worsening renal and respiratory failure until her death two days later. An autopsy permit was not granted.

Discussion

Our patient had metastatic carcinoma and was receiving steroids making her more likely to acquire Legionnaires' disease than the general population.[4] Her clinical presentation was similar to those already noted by other investigators[5] (except for the involvement of the pericardium).

The *Legionella pneumophila* is most commonly detected in the lungs, but has also been shown to spread to other organs especially in debilitated patients where it has been isolated from the blood (1), mediastinal lymph nodes, liver, spleen (2) and blood vessels of the heart, kidney, and spleen (3). Patients with serologically proven Legionnaires' disease have had both myocarditis (6), massive pericardial effusion (7) and constrictive pericarditis (8), but to our knowledge the organism has not previously been isolated from the pericardial fluid. Our patient demonstrates that pericarditis may be a feature of Legionnaires' disease.

References 1. Meyer RD, Edelstein PH, Kirby BD, *et al.* Legionnaires' disease: unusual clinical and laboratory features. *Ann Intern Med* 1980; 93:240-3. 2. Watts JC, Hicklin MD, Thomason BM, Callaway CS, Levin AJ. Fatal pneumonia caused by *Legionella pneumophila*, serogroup 3. Demonstration of the bacilli in extrathoracic organs. *Ann Intern Med* 1980; 92 (Part 1):186-188. 3. White HJ, Felton WW, Cun CN. Extrapulmonary histopathologic manifestations of Legionnaires' disease. *Arch Pathol Lab Med* 1980; 104:287-289. 4. England AC III, Fraser DW, Plikaytis BD, Tsai TF, Storch G and Broome CV. Sporadic Legionellosis in the United States: The first thousand cases. *Ann Intern Med* 1981; 94:164-170. 5. Cordes LG, Fraser DW. Legionellosis. *Med Clin North Am.* 1980; 64:395-416. 6. Gross D, Willens H, Zeldis SM. Myocarditis in Legionnaires' disease. *Chest* 1981; 79:232-234. 7. Harris LF. Legionnaires' disease associated with massive pericardial effusion. *Arch Intern Med* 1981; 141:1385. 8. Landes BW, Pogson W, Beauchamp GD, Skillman RK, Brewer JH. Pericarditis in a patient with Legionnaires' disease. *Arch Intern Med* 1982; 142:1234-1235.

Acknowledgement

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Primary Lung Cancer in Patients Under 40:

A Collective Review of 304 Patients

PORTER MAYO, M.D., SIBU P. SAHA, M.D. and
WALKER MAYO, J.D.

Lung cancer in patients under the age of 40 is rare, but must seriously be considered in every instance of radiologic lung lesion of indefinite etiology. Included in this review of 304 patients are 33 cases of the authors under the age of 40 having primary lung cancer. The stage of the disease in these young people at the time of diagnosis was far-advanced, the resection rate low and survival rate poor (4.4% five-year survival in the collected series). The incidence of adenocarcinoma and small cell undifferentiated carcinoma was high. Prompt diagnosis and resection of the tumor offers the best prognosis.

LUNG cancer most often affects older adults with the peak incidence occurring between 50 and 70 years of age; however, young people are not immune. Putnam[3] in a study of military personnel reported an incidence of 6% of patients with lung cancer under the age of 40; however, most studies indicate the incidence to be near 2%.[1,2,4,5,6,7,8,9,10,11,12] Whenever young people are affected with lung cancer, the course of the disease is characteristically rapid, bizarre and virulent. Many reports on lung cancer in young people have been published; however, they have involved relatively few patients. We believe that a more valid interpretation of the frequency of cell type, ratio of male to female, symptoms, treatment, and prognosis could best be interpreted by a collective review.

MATERIALS & METHODS: This report is a collective review of 304 patients, including 33 cases by the author, under the age of 40 having primary lung cancer. Only those patients who had histologic diagnosis of cancer were included in our series.

The age, sex, and color distribution in the authors' series are shown in Table 1. The youngest patient was 28 years of age. There were 29 men and four women, a ratio of 7.25:1 (collective series 253 men and 51 women, a ratio of 5:1).

SMOKING HISTORY: A smoking history was recorded in 28 of our 33 patients. There were 26 smokers and two non-smokers. Most patients who smoked consumed heavily and for many years (Table 2). Patients with a smoking history averaged 1 1/2 packages per day for 10 years.

SYMPTOMS: Most patients were symptomatic at the time of examination. Eighteen patients presented with pain corresponding with the high incidence of pain reported by Anderson[6] and Kwong.[13] Ten of the 18 patients had chest pain and eight had shoulder pain as initial symptoms. Three patients presented with hemoptysis, two with wheezing, and two with hoarseness. One patient each presented with the following symptoms: dyspnea, weakness, weight loss, cough, and cervical lymph gland swelling. Three patients were asymptomatic. Two of the three had unrelated injuries which prompted chest roentgenograms; one patient had a routine study showing a solitary nodule.

CHEST ROENTGENOGRAMS: The right lung was involved in 15 patients and the left lung in 18 patients. The chest roentgenogram showed an infiltrate or consolidation in 20 patients, hilar mass in eight patients, and pleural effusion in five patients.

PATHOLOGY: The cumulative review shows an irregular percent distribution for the major histologic

TABLE 1

THE AGE, SEX AND COLOR DISTRIBUTION OF 33 LUNG CANCERS IN PERSONS UNDER THE AGE OF 40 (MAYO)

AGE	MALE	FEMALE	WHITE	BLACK
25-29	2	0	2	0
30-34	8	1	8	1-M
35-39	19	3	21	1-F

TABLE 2

DURATION OF SMOKING (MAYO)

YEARS	# OF PATIENTS
1-10	4
11-15	8
16-20	12
21-30	2

TABLE 3

CUMULATIVE REVIEW OF SERIES—CELL TYPE
PATIENTS WITH LUNG CANCER UNDER THE AGE OF 40
(304 PATIENTS)

AUTHOR	# OF CASES		EPIDERMOID	ADENO-CARCINOMA	SMALL CELL	LARGE CELL	BRONCHIOLAR	ANA-PLASTIC
	M	F						
Anderson et al (1954)	27	0	18.5% (5/27)	40.7% (11/27)	None	None	None	40.7% (11/2)
Neuman et al (1956)	39	12	7.8% (4/51)	37.3% (19/51)	23.5% (12/51)	27.5% (14/51)	None	3.9% (2/51)
Rivkin et al (1958)	26	0	34.6% (9/26)	26.9% (7/26)	None	None	7.6% (2/26)	30.8% (8/26)
Kwong et al (1964)	37	7	25.0% (11/44)	9.2% (4/44)	54.5% (24/44)	None	None	11.3% (5/44)
Hood et al (1965)	23	10	20.0% (6/33)	46.0% (15/33)	None	None	4.0% (2/33)	30.0% (10/3)
Kennedy (1972)	29	10	17.9% (7/39)	7.7% (3/39)	66.6% (26/39)	7.7% (3/39)	None	None
Kyriakos (1974)	27	0	18.5% (5/27)	33.3% (9/27)	25.9% (7/27)	18.5% (5/27)	3.7% (1/27)	None
Putnam (1977)	16	8	21.0% (5/24)	38.0% (9/24)	8.0% (2/24)	21.0% (5/24)	4.0% (1/24)	8.0% (2/24)
Mayo (1981)	29	4	39.0% (13/33)	39.0% (13/33)	12.0% (4/33)	6.0% (2/33)	3.0% (1/33)	None
TOTAL NO.	253		51 (304) (65/304)	(90/304)	(75/304)	(29/304)	(7/304)	(38/304)
PERCENT DISTRIBUTION			21.4%	29.6%	24.7%	9.5%	1.98%	12.5%

TABLE 4

CELL TYPE OF 33 LUNG CANCERS IN PERSONS
UNDER THE AGE OF 40 (MAYO)

CELL TYPE	TOTAL PATIENTS (33)	SMOKERS (26)	NON-SMOKERS (2)	SMOKING HISTORY NOT RECORDED (5)
Epidermoid	39% (13/33)	38% (10/26)	0	60% (3/5)
Adenocarcinoma	39% (13/33)	46% (12/26)	50% (1/2)	0
Small cell	12% (4/33)	8% (2/26)	0	40% (2/5)
Large cell	6% (2/33)	8% (2/26)	0	0
Bronchiolar	3% (1/33)	0	50% (1/2)	0

TABLE 5

FIVE-YEAR SURVIVALS (3 OF 33 PATIENTS, STAGE I) (MAYO)

AGE	SEX	SMOKING HABITS	CELL TYPE	TREATMENT	SURVIVAL
30	F	2 pks cig/d 13 yrs	Epidermoid	LUL resection	16 years
37	F	1/4 pk cig/d 20 yrs	Adenocarcinoma	Resection of RUL & RMD	6 years
28	M	Never smoked	Adenocarcinoma	LLL resected	7 years

subtypes of tumors. (Table 3) The one relatively consistent tendency has been the high incidence of small cell undifferentiated carcinoma. Kennedy reports that the incidence of undifferentiated carcinoma, mainly the small cell type, is high in the age group under 40 and that there is an increased proportion of this cell type in the British Isles as compared with America.[18] In America an increasing proportion of adenocarcinoma has been found in young patients.[16,17] Epidermoid and adenocarcinoma cell types predominated in our series. (Table 4)

TREATMENT: Of the 33 patients, 27 thoracotomies were performed. There were seven lobectomies and five wedge resections, the latter all considered to be palliative. Fifteen patients had exploration and biopsy. Four of the patients treated by lobectomy also received radiation therapy; however, three patients had lobectomy but no additional treatment. The non-resectable patients received chemotherapy, seven in combination with radiation therapy. The remaining patients were treated by radiation therapy and symptomatically.

STAGE OF THE DISEASE: Three patients presented in Stage I, one in Stage II, and 29 in Stage III (American Joint Committee for cancer staging). Our findings are in agreement with Putnam,[3] "The stage of the disease at the time the patient was initially examined was similar to or worse than that found in other studies. Although there was no delay in diagnosis, the patients tended to have advanced disease when seen initially."

SURVIVAL: Five of our 33 patients are alive. Three are five-year survivors (9.3%). (See Table 5) The other survivors are alive at 40 months and 46 months respectively. Of those who died, the interval between diagnosis and death was 7.3 months. The three five-year survivors all had Stage I disease and underwent successful resections. Lymph node metastasis was notably absent in the five-year survivors, a finding emphasized by Kwong.[13]

DISCUSSION: Although exhaustive reports of lung cancer have been published exploring almost every conceivable facet of this disease, including age, there has been insufficient analysis of those patients under the age of 40.

TABLE 6

CUMULATIVE REPORT FIVE-YEAR SURVIVORS
(304 PATIENTS)
(REFER TO TABLE 5)

AUTHOR	EPI-DERMOID	ADENO-CARCINOMA	SMALL CELL	LARGE CELL
Rivkin	1 (M)	None	None	None
Kwong	3 (M)	1 (F)	1 (M)	None
Kennedy	1 (F)	None	None	None
Kyriakos	1 (M)	1 (M)	None	1 (M)
Mayo	1 (F)	1 (M) 1 (F)	None	None
TOTAL	7	4	1	1

Note: Anderson had 1 (M) five-year survivor; cell type not specified. Total: 14 five-year survivors. (4.6%)

The authors' review of 304 patients (Table 4) supports the view that primary bronchogenic carcinoma in patients under the age of 40 has a rapid and virulent course. This conclusion is based on the far-advanced stage of disease in patients when initially seen, the excessively high percent of patients presenting with pain, the poor rate of resectability, scarcity of five-year survivals and rapid demise from diagnosis to death when compared to the older age group. The cumulative five-year survival rate of 4.6% (14 of 304 patients) (Table 6) contrasts sharply with the 9% seen in all primary lung cancers.[14,15] Even though the younger patient usually is a better operative risk, having the advantages of prior good health and no serious illness, the survival rates have been dismal. The poor results are primarily due to the high frequency of adenocarcinoma and small cell undifferentiated carcinoma with corresponding rapid growth and early metastasis.

The age of the patient should not mitigate against the diagnosis of lung cancer. To delay on the false hope of a benign lesion is no longer tenable. Surgical resection is the only form of treatment with hope of prolonged survival. The method of treatment for young

people having lung cancer and those of an older age group does not differ. Aggressive treatment of young people with bronchogenic carcinoma can yield cures in a given number of cases, however, it is successful only when the disease is localized and in the absence of nodal spread.[19] Presently, any hope of improving results of treatment must lie with earlier diagnosis and excision of carcinoma.

Summary

This collective review of 304 patients having lung cancer under the age of 40 confirms the abysmal prognosis. Early diagnosis and aggressive surgical excision of the tumor offers the best prognosis whatever the age. Prevention can best be realized by major change in smoking habits.

Acknowledgement

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References 1. Rivkin LM, Salyer JM: Bronchogenic carcinoma in men under 40 years of age. *Chest* 34:521, 1958. 2. Weiss W: Operative mortality and five-year survival rates in men with bronchogenic carcinoma. *Chest* 66:483, 1974. 3. Putnam JS: Lung carcinoma in young adults. *JAMA* 238:35, 1977. 4. Strauss MJ: Lung Cancer. New York: Greene and Stratton, 1977, 11-13. 5. Aronberg D, Sagel S, LeFrak S, Kuhn C, Susman N: Lung carcinoma associated with bullous lung disease in young men. *Am J Roentgenology* (AJR) 134:249, 1980. 6. Anderson AE, Buechner HA, Yaker I, Ziskind, MM: Bronchogenic carcinoma in young men. *Am J Med* 16:404, 1954. 7. Burford TH, Center S, Ferguson TB, Spjot HJ: Results in the treatment of bronchogenic carcinoma. *J Thorac Surg* 36:316, 1958. 8. Ehler A, Stranahan A, Olson KB: Bronchogenic carcinoma: a study of 517 cases. *N Engl J Med* 251:207, 1954. 9. Hood RH Jr, Campbell DC Jr, Dooleg BN, Dooling JA: Bronchogenic carcinoma in young people. *Chest* 48:469, 1965. 10. Large SE, Morgan WKC: Bronchogenic carcinoma in young adults. *Br J Tuberc* 52:185, 1958. 11. Neuman HW, Ellis FH, McDonald JR: Bronchogenic carcinoma in persons under forty years of age. *N Engl J Med* 254:502, 1956. 12. Kyriakos M, Webber B: Cancer of the lung in young men. *J Thorac Cardiovasc Surg* 67:637, 1974. 13. Kwong KH, Slade PR: Carcinoma of the bronchus in young adults. *Br J Dis Chest* 58:124, 1964. 14. Cutler SJ, Myers MH, Green SB: Trends in survival rate of patients with cancer. *N Engl J Med* 293:122-124, 1975. 15. Matthay RA: Section on Cancer. *Bull Am Coll Chest Phys* 20:22, 1981. 16. Cox JD, Yessner RA: Adenocarcinoma of the lung: recent results from the Veteran's Administration lung group. *Am Rev Respir Dis* 120:1025, 1979. 17. Vincent RG, Pickren JW, Lane, WW et al: The changing histopathology of lung cancer: a review of 1682 cases. *Cancer* 39:1647, 1977. 18. Kennedy A: Lung cancer in young adults. *Br J Dis Chest* 66:147, 1972. 19. DeCaro L, Benfield, JR: Lung cancer in young persons. *J Thorac Cardiovasc Surg* 83:372, 1982.

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Risk Factors in Left Main Coronary Artery Stenosis

Experience With 296 Surgical Patients

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Left main coronary artery (LMCA) stenosis was treated surgically in 296 patients in a nine-year period. Increased intraoperative and 30-day mortality rates were seen in patients who underwent emergency surgery or had poor left ventricular function and in diabetic and female patients. The major causes of death in the first 30 days after operation were pulmonary embolism and ventricular arrhythmias. Patients operated upon electively had the same mortality risk as other patients undergoing bypass grafting of other coronary arteries. Ninety-five percent of the patients surviving in 1982 were evaluated in New York Heart Association Functional Class I or II, even those who had shown very poor ventricular function preoperatively. Probability of survival after the first 30 postoperative days throughout the nine years of study was found to be 80.3%, a life expectancy equal to that of the normal population.

THE left main coronary artery (LMCA) provides the major blood supply to the left ventricle. Stenosis of 50% or more of this vessel carries a poor prognosis without surgical treatment even when left ventricular function is good, so that diagnosis of significant left main coronary artery stenosis at coronary angiography is an indication for surgical treatment. However, the overall operative risk for left main coronary artery stenosis is usually higher than for single, double or triple coronary artery stenosis.

Out of 3,614 patients with coronary artery disease who underwent coronary bypass grafting by our group between 1972 and 1980, 296 patients were operated upon for left main coronary artery stenosis, representing an incidence of 8.2%. The following report will discuss the mortality of these patients with particular reference to the influence of age, sex, left ventricular function, emergency procedures, degree and location of stenosis, associated right coronary artery stenosis, and other associated diseases such as hypertension, previous myocardial infarction, and diabetes.

Material and Methods

296 patients underwent coronary artery grafting for the treatment of left main coronary artery stenosis greater than 50% between February, 1972 and November, 1980. These 239 males and 57 females ranged in age from 31 to 86 years. Diagnosis was made in each case by coronary angiography and ventriculograms.

Left ventricular performance was classified according to the ejection fraction determined by ventriculogram or multigated acquisition (MUGA) scan. Performance was considered normal when the ejection fraction was greater than 50%, moderately dysfunctional with an ejection fraction of 30% to 50%, moderately severe with an ejection fraction of 15% to 30%, and severely dysfunctional when the ejection fraction was less than 15%.[1-5]

A dominant left circulation was considered to be present in an anatomical situation where the posterior descending artery and the posterior left ventricular branches rose from the left side, or where the right coronary artery was completely occluded or badly diseased with very poor distal vessels not suitable for bypass. A dominant right circulation was present when the right coronary artery supplied the posterior descending and posterior left ventricular branches even if severe stenosis or occlusion was present, as long as it could be bypassed.

Emergency cases were defined as those operated upon within 24 hours of cardiac catheterization. Urgent cases were operated upon one to six days after cardiac catheterization, and elective cases more than seven days

TABLE 1
OVERALL MORTALITY

# of Pts.	Intraoperative Mortality	1 to 30 days Mortality	Follow-up Mortality 1-117 months with a mean of 35 months.
296	7 2.4%	19 6.4%	30 10.1%

TABLE 2
AGE AS A RISK FACTOR IN LMCA STENOSIS

Age	30-39	40-49	50-59
No. patients	16	49	110
Intra-operative mortality	2 (12.5%)	—	2 (1.8%)
Postoperative mortality within 30 days	—	2 (4.1%)	8 (7.3%)
Follow-up mortality	1 (6.3%)	7 (14.3%)	12 (10.9%)
Age	**60-69**	**70-79**	**80-89**
No. patients	91	27	3
Intra-operative mortality	2 (2.2%)	1 (3.7%)	—
Postoperative mortality within 30 days	5 (5.5%)	5 (18.5%)	—
Follow-up mortality	6 (6.6%)	3 (11.1%)	1 (33.3%)

TABLE 3
SEX AS A RISK FACTOR IN LMCA STENOSIS

#Pts.	FEMALES 57	MALES 239
Intraoperative Mortality	3 (5.3%)	4 (1.7%)
1-30 day Mortality	3 (5.3%)	16 (6.7%)
Follow-up Mortality	9 (15.8%)	21 (8.8%)
TOTAL	15 (26.3%)	41 (17.2%)

TABLE 4
MORTALITY RELATED TO NUMBERS OF CORONARY BYPASS GRAFTS

	CBG × 1	CBG × 2	CBG × 3	CBG × 4	CBG × 5
Patients	11	83	155	44	3
Intra-operative	0	5 (6.0%)	2 (1.3%)	0	0
1-30 days	2 (18.2%)	4 (4.8%)	10 (6.4%)	3 (6.8%)	0
Follow-up	2 (18.2%)	12 (14.4%)	9 (5.8%)	6 (13.6%)	1 (33.3%)

post-catheterization. Four patients in this series underwent a second coronary artery bypass operation for stenosis or occlusion of the previous saphenous vein graft, progression of disease in the native vessels or both.

The operative procedure followed that described in a previous report[6] and included hemodilution, moderate hypothermia, aortic cross clamping for distal anastomoses, and cardiac arrest produced earlier in the series by ischemic ventricular fibrillation and since 1978 by cold potassium cardioplegia. Intra-aortic balloon pump support was not used either preoperatively or postoperatively in this series.

The functional classification of the patients after operation was determined by using the New York Heart Association guidelines, and the presence of hypertension, previous myocardial infarction and diabetes was recorded for each patient before surgery. Patients were interviewed by telephone in early 1982 if recent follow-up information could not be obtained from reports of clinical visits to the surgeon or cardiologist. Only eight patients (2.7%) could not be followed throughout the entire study, the portions of their postoperative history could not be included.

Statistical significance of the results was determined by Chi square analysis.

Results

Operative mortality: Seven patients (2.3%) died intraoperatively. Three of these patients, each with a normal left ventricle, underwent emergency surgery. Two were operated on urgently, one with a normal left ventricle and the other with an ejection fraction of 15% to 30%. Two were operated upon electively, one with an ejection fraction of 15% to 30% and the other of less than 15%.

Hospital mortality (1 to 30 days postoperatively): Nineteen patients (6.7%) died within 30 days of surgery. Two of these, both 73-years-old, were emergency cases; one underwent a simultaneous mitral valve replacement. The cause of death in both patients was pulmonary embolism and stroke. Ten patients were operated upon urgently, five with a normal left ventricle, three with an ejection fraction of less than 50%, and three with an ejection fraction of less than 30%. The cause of death in the patients operated upon urgently were pulmonary embolism (3), ventricular arrhythmias (5), myocardial infarction (1), and low cardiac output (1). Seven patients underwent elective

operations, four with a normal left ventricle, one with an ejection fraction of less than 50%, and two with an ejection fraction of less than 30%. Causes of death in the elective patients were arrhythmias (4), myocardial infarction (1), low cardiac output (1), pulmonary embolism (1), and massive gastrointestinal bleeding (1).

Late mortality: Thirty patients died during the follow-up period, between one and 117 months postoperatively. Causes of death were myocardial infarction (10), stroke (4), congestive heart failure (3), cancer (3), cardiac arrest (2), acute abdomen (2), end-stage renal disease (2), pulmonary embolism (1), and automobile accident (1). Thus the late causes of death were cardiac in origin in 15 patients (50%), noncardiac in 12 patients (40%), and undetermined in three. Total mortality during the follow-up period was 10%, with the highest rate (6.4%) within the first month after surgery. The mortality rate was 3.8% for the first year, 1.7% for the second year, and then about 0.7% per year thereafter. Probability of survival throughout the nine years of study was 80.3%, slightly higher than that for a normal population (78.8%) matched by age, sex, and race.

Age (Table 2): Age did not appreciably affect the intraoperative risk, but the 30-day mortality rate was higher for patients over age 70 as a result of an increased incidence of pulmonary embolism and stroke. Thirty of the 296 patients were over 70 years of age and these patients had a 30-day mortality rate twice as high as the other age groups. On the other hand, operative mortality in the younger age group (30-39 years) was five times higher than in the age group of 70-80 years because of the emergency nature of their clinical situations and diffuse coronary arteriosclerosis. Thus advanced age by itself did not appear to introduce a significant operative risk.

Sex: (Table 3) Females had a slightly higher intraoperative risk than males, but the 30-day mortality rate for males and females was almost equal. During the follow-up period the mortality rate for females was twice that of males.

Number of grafts: (Table 4) The most frequent operative procedure (155 patients) was a triple graft. There was no significant relation between the number of grafts and the intraoperative mortality or the 30-day mortality. Two of the eleven patients who had only a single coronary artery graft died, but this was too small a group to determine any statistical significance. In the long term follow-up, however, patients who had a triple coronary graft had a lower mortality rate than any of the other groups.

TABLE 5

LEFT VENTRICLE FUNCTION IN TERMS OF EJECTION FRACTION

	No. patients	Intraoperative mortality	1-30 days postoperative mortality	Follow-up mortality
≥50%	214	4 (1.9%)	9 (4.2%)	15 (7.0%)
30%-50%	44	0	5 (11.4%)	4 (9.1%)
15%-30%	22	2 (9.1%)	3 (13.6%)	6 (27.3%)
≤ 15%	16	1 (6.3%)	2 (12.5%)	5 (31.3%)

P<0.005

TABLE 6

INFLUENCE OF THE DEGREE AND LOCATION OF STENOSIS ON MORTALITY

	<70%	>70%	100%	ostial	non-ostial
No. patients	97	194	5	36	260
Intra-operative mortality	1 (1.0%)	6 (3.1%)	0	2 (5.5%)	5 (1.9%)
1-30 days post-operative mortality	8 (8.2%)	11 (5.7%)	0	4 (11.1%)	15 (5.7%)
Follow-up mortality	6 (6.2%)	24 (12.4%)	0	3 (8.3%)	27 (10.3%)

TABLE 7

DOMINANT LEFT CIRCULATION VERSUS DOMINANT RIGHT CIRCULATION WITH ASSOCIATED SIGNIFICANT RIGHT CORONARY ARTERY STENOSIS

	No. patients	Intra-operative mortality	1-30 days postoperative mortality	Follow-up mortality
Dominant right circulation	172	1 (0.6%)	10 (5.8%)	18 (10.5%)
Dominant left circulation	68	3 (4.4%)	7 (10.3%)	10 (14.7%)
LMCA stenosis and normal right coronary artery	56	3 (5.4%)	2 (3.6%)	2 (3.6%)

P<0.05

TABLE 8
INFLUENCE OF PRIORITY OF SURGERY ON OPERATIVE MORTALITY

	Emergency	Urgent	Elective	Overall
No. patients	43	126	127	296
Intraoperative mortality	3 (7.0%)	2 (1.6%)	2 (1.6%)	7 (2.3%)
1-30 days postoperative mortality	2 (4.7%)	10 (7.9%)	7 (5.5%)	19 (6.4%)
TOTAL	5 (11.6%)	12 (9.5%)	9 (7.1%)	26 (8.7%)

TABLE 9
DIABETES AS A RISK FACTOR IN LMCA STENOSIS
55 patients

LVEF	>50%	30-50%	15-30%	<15%
#Pts.	40	9	3	3
Intraoperative Mortality	—	—	—	1 (33.3%)
1-30 days Mortality	3 (7.5%)	2 (22.2%)	—	—
Follow-up Mortality	3 (12.5%)	3 (33.3%)	1 (33.3%)	—

TABLE 10
PREVIOUS MI AS A RISK FACTOR IN LMCA STENOSIS
149 patients

LVEF	>50%	30-50%	15-30%	≤15%
#Pts.	97	31	17	4
Intraoperative Mortality	1 (1.0%)	—	2 (11.8%)	—
1-30 days Mortality	5 (5.2%)	2 (6.4%)	1 (5.8%)	1 (25.0%)
Follow-up Mortality	9 (9.3%)	5 (16.1%)	3 (17.6%)	1 (25.0%)

TABLE 11
HYPERTENSION AS A RISK FACTOR IN LMCA STENOSIS
141 Patients

LVEF	>50%	30-50%	15-30%	≤15%
#Pts.	96	25	13	7
Intraoperative Mortality	1 (1.0%)	—	1 (7.6%)	1 (14.3%)
1-30 days Mortality	5 (5.2%)	4 (16.0%)	3 (23.0%)	—
Follow-up Mortality	8 (8.3%)	2 (8.0%)	4 (30.1%)	2 (28.6%)

Left ventricular function: (Table 5) The operative, 30-day, and follow-up mortality of patients with ejection fractions over 50% and those of 30% to 50% was similar. Patients with moderately severe left ventricular dysfunction (ejection fraction of 15% to 30%) and those with very severe dysfunction (ejection fraction of less than 15%) had an operative mortality three to four times that of patients with normal ventricular function. Mortality in the first 30 days and in the follow-up period was also three times higher in these groups. The influence of left ventricular function on mortality was found to be statistically significant ($P<0.005$).

Degree and location of stenosis: (Table 6) All patients in the study were classified as having less than 70% LMCA stenosis, more than 70% LMCA stenosis, or complete occlusion of this artery. Patients with LMCA stenosis of less than 70% had an operative mortality (1.0%) similar to other patients undergoing coronary bypass grafting which has been found in our earlier study to be 1.2% overall.[7] Patients with more than 70% stenosis had greatly increased mortality throughout the treatment period, ranging from double to more than three times higher than the less-stenotic group. On the other hand, all five patients with preoperative complete occlusion of the LMCA did well during this study period.

Although there was a difference in operative and 30-day mortality between the group of patients with left main ostial stenosis and those with non-ostial stenosis, the Chi square test did not show any statistical difference between them since the sample of LMCA ostial stenosis was too small.

Influence of dominant coronary circulation: (Table 7) Two hundred and forty (240) patients had significant LMCA stenosis associated with stenosis of the right coronary artery as well. Of these, 172 patients had a dominant right circulation and 68 patients had dominant left circulation. The remaining 56 patients had a normal right coronary artery. The intraoperative and 30-day mortality for patients with dominant right circulation was half that for those who had a dominant left circulation, but the follow-up mortality rate was nearly the same in both groups. On the other hand, patients with a normal right coronary artery had an operative risk similar to those with dominant left circulation because of the emergency nature of the problem. Thirty-day mortality was similar to that of patients with dominant right circulation, but the incidence of death in the follow-up period was much less than in

the other two groups. These differences were statistically different ($P<0.05$).

Emergency, urgent and elective procedures: (Table 8) Forty-three patients were operated upon as an emergency within 24 hours of cardiac catheterization, 126 between one and six days, and 127 patients electively. Emergency patients had a much higher intraoperative mortality than those treated urgently or electively but the overall mortality was not significantly different. However, the three emergency patients who died intraoperatively had a normal left ventricle whereas the elective cases had an ejection fraction of less than 30% and less than 15%. One urgent case had a normal left ventricle and a second had an ejection fraction of 15% to 30%. The two emergency patients who died postoperatively were each 73-years-old and one of them had a simultaneous mitral valve replacement. Of the 10 urgent patients who died in the first 30 days postoperatively, five had normal left ventricles and three had severely decreased ventricular function. Two of the elective patients who died had an ejection fraction of 15% to 30%.

Associated disease: (Table 9, 10, 11) A history of hypertension and previous myocardial infarction and diabetes mellitus was noted in half of the patients studied. There was no significant difference in intraoperative or hospital mortality in patients with these conditions in the presence of normal left ventricular function. However, when one of these factors was associated with poor left ventricular function the operative and hospital mortality doubled.

Perioperative myocardial infarction: Seven patients (2.4%) had a perioperative myocardial infarction proven by enzyme elevation and the appearance of new Q-waves on the electrocardiogram. Two were females and five were males. Perioperative myocardial infarction accounted for two deaths in the immediate postoperative period, one male and one female. In these patients, marked ST segment changes, hypotension, and bradycardia occurred suddenly in a few hours after operation and probably represented acute coronary artery spasm, since post-mortem examination in one patient and return to surgery in the other demonstrated patent grafts. The remaining five patients had an uneventful postoperative course and returned to functional class I in the follow-up period.

Reoperation: Four patients underwent reoperation for saphenous vein stenosis or occlusion and progression of disease in the native vessels. Two of these patients died two and three days postoperatively. One of these had Hodgkin's disease and the previous single anterior descending coronary graft had closed, resulting in a decrease in ejection fraction from 50% to 30% in the 13-month interval between operations. The second patient had undergone bypass grafting to the left anterior descending coronary artery and returned 77 months later with severe angina caused by advanced stenosis in the dominant right coronary artery. He underwent coronary bypass graft from the innominate artery to the right coronary artery but died postoperatively from ventricular arrhythmias. The remaining two patients remained well 56 months and 63 months following their second operative procedure.

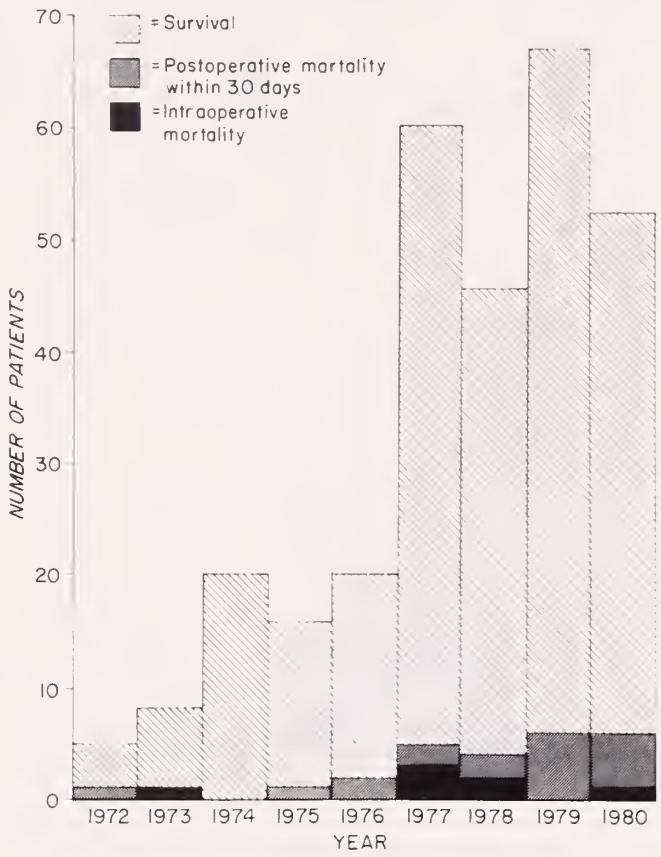


Fig. 1: Intraoperative and 30-day mortality by year.

Additional procedures: Three patients underwent aortic valve replacement and one a mitral valve replacement simultaneously with coronary artery bypass grafting for left main coronary artery stenosis. The patient who underwent mitral valve replacement was operated on as emergency for unstable angina and papillary muscle dysfunction and died in the hospital. All three patients whose aortic valves were replaced sur-

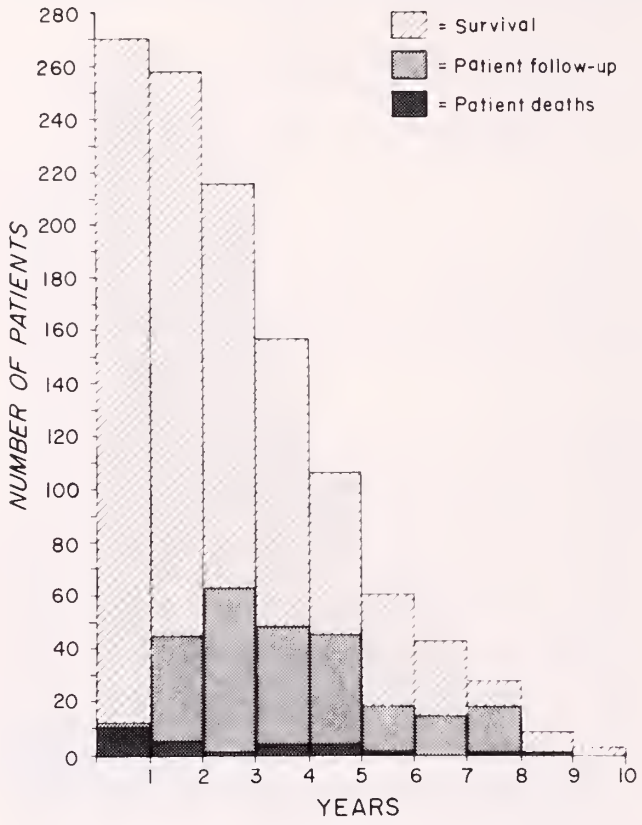


Fig. 2: Total mortality throughout follow-up years.

vived but one died suddenly four months postoperatively from pulmonary embolism or arrhythmia.

Functional classification: (Figure I) Of the 240 surviving patients, 186 were found to be in Class I at the end of study, 45 in Class II, eight in Class III and one in Class IV. All nine patients with an ejection fraction of less than 15% improved to Class I or Class II in the postoperative period. All but one of the 11 patients with an ejection fraction of 15% to 30% improved similarly. Most of the 200 patients with preoperative ejection fraction of greater than 30% are now in Class I or II.

Discussion

Significant LMCA stenosis compromises blood flow of the entire left ventricle. In this situation the myocardium is more in jeopardy from a single occlusive event than in other forms of severe coronary artery stenosis.[8,9] It is generally accepted that surgery significantly prolongs survival of patients with more than 70% LMCA stenosis and of those with preoperative but normal left ventricular function.[10-20] A similar although not statistically significant beneficial effect has been demonstrated in patients with 50% to 70% LMCA stenosis and in those with normal left ventricular function.

Surgical treatment of stenosis in this vital artery has an overall higher mortality rate than in other forms of coronary artery disease.[21] In this series the total mortality in the first 30 days was 8.7%. Three of the seven patients who died intraoperatively had undergone emergency surgery. Three others exhibited severe left ventricular dysfunction. Only one of these patients died after urgent surgery despite a normal left ventricle. The intraoperative deaths were almost exclusively caused by the very unstable nature of the coronary circulation or a severely damaged left ventricle.

The causes of later hospital mortality were investigated in the 19 patients who died. The causes of death in two emergency-treated patients were pulmonary embolism and stroke, and these deaths probably could not have been prevented. Three of the 10 patients who were operated upon urgently had very severe left ventricular dysfunction, while three deaths were caused by pulmonary embolism, and five by ventricular arrhythmias. Of the seven patients who died after elective surgery, two had very severe left ventricular dysfunction, one died of pulmonary embolism, and four suffered fatal ventricular arrhythmias. Thus in these 19 hospital deaths, there were five from pulmonary embolus and nine from ventricular arrhythmias. We hope that more aggressive medical treatment of the ventricular arrhythmias can control this problem in the future, although all of these patients were being treated for arrhythmia at the time of their deaths. The problem of pulmonary embolism has continued to plague us despite early ambulation, leg elevation, and low dose heparin therapy. In a controlled study undertaken by our group which involved 2200 patients, a trial of low dose heparin therapy did not diminish the postoperative incidence of pulmonary embolism. A major factor in its occurrence in open heart patients was found to be a history of prolonged hospitalization for an unstable condition that necessitated transfer to this institution for therapy, while patients admitted electively for heart surgery proved to have a low incidence of pulmonary embolism. Thus we believe that the many pulmonary emboli result from preoperative venous thrombi in the legs and pelvic veins which are unaffected by heparin therapy after surgery.

Advanced age did not appear to increase the intraoperative risk.[21,22] The mortality for patients in the

fourth decade of life was three times greater than for patients older than age 70. This was caused by the extremely unstable condition of the younger patients and the presence of a more malignant and more diffuse coronary artery disease process. Even the vessels that were grafted in the younger patients had diffuse disease, but the distal coronary arteries in the older patients were relatively more free of disease.

Although there were many fewer female patients in this series (M:F=4:1), female mortality was higher intraoperatively and during the follow-up period.[21] Often the coronary vessels in female patients were much smaller and more diffusely diseased, making the technical result less satisfying and perhaps accounting for the poor long term results.

Hypertension and diabetes mellitus are associated with acceleration of coronary arteriosclerosis but were not the cause of any increase in operative risk or hospital mortality as long as left ventricular function was satisfactory.[15,21] However we found in this study that when one of these factors was accompanied by poor left ventricular function the operative and hospital mortality was greatly increased. Female diabetics had a higher mortality rate than male diabetic patients. A previous history of myocardial infarction was not associated with increased operative risk unless the patient had poor ventricular function.

From this report it is evident that the preoperative left ventricular ejection fraction is a major factor in determining operative, 30-day and follow-up mortality. Patients with severe left ventricular dysfunction had mortality rate at least three [21,23-25] times higher throughout this study period.[35-37] This was determined to be statistically significant ($P<0.005$) and the trend was particularly evident when left ventricular dysfunction was combined with other factors such as hypertension, diabetes, or an urgent operation, especially in a female patient.

An interesting clinical observation is that many patients who demonstrated poor left ventricular function at ventriculography and who had a pale ischemic ventricle intraoperatively with an elevated pulmonary artery pressure did well after surgery and progressed to Class I during the follow-up period.

The severity of the stenosis also had an effect on the operative mortality rate. Patients with stenosis less than 70% had a mortality rate similar to all other patients undergoing coronary artery bypass grafting[7] and the follow up mortality was the same. Those with

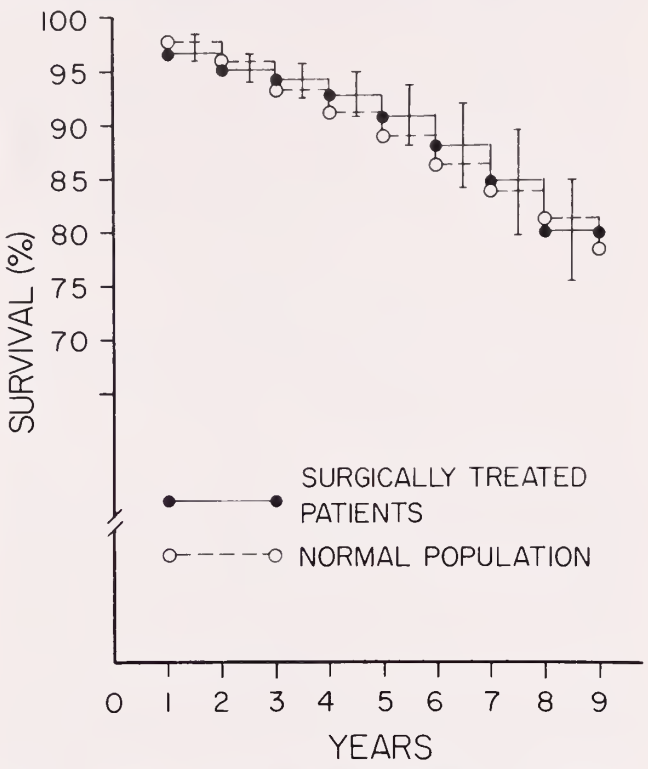


Fig. 3: Actuarial prediction of survival. Standard errors noted for analysis of surgical study group. Standard error for analysis of normal population is nil.

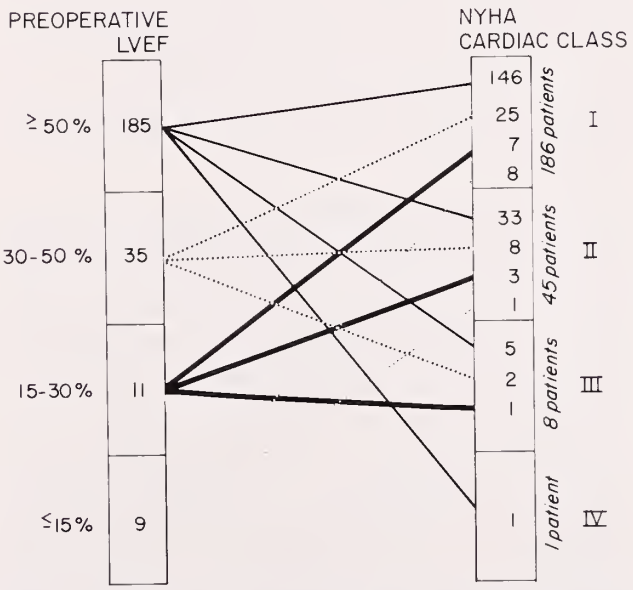


Fig. 4: Comparison of preoperative left ventricular function to level of physical activity attained by February, 1982. LVEF = Left Ventricular Ejection Fraction; NYHA = New York Heart Association.

a stenosis of greater than 70% had a higher mortality rate throughout the entire postoperative period. None of the five patients with complete occlusion of the LMCA died during the study period, probably because they sustained a slow progressive stenosis during which the collateral circulation from the right coronary artery developed and protected the patient. Symptoms in these patients occurred as a result of significant narrowing in the dominant right coronary artery.

Another interesting group were the five patients with isolated lesions of the LMCA with no involvement of the left anterior descending, circumflex, or right coronary artery system. Only one of these died, a patient who was operated on as an emergency whose death resulted from diffuse coronary spasm in the immediate postoperative period. The nine surviving patients with complete occlusion or isolated lesions in the left main coronary artery have continued to remain in functional Class I throughout the follow-up period. We could not determine a statistically significant difference in the mortality between patients who had ostial stenosis and those in whom the stenosis was located more distally in the LMCA although clinical difference in mortality was observed.

The significance of the dominance of the left or right circulation was studied.[15,21] Patients with a normal right coronary artery had a lower mortality in the follow-up period, approximately the same as our experience with other patients without left main coronary artery disease who undergo coronary bypass graft.[7] A dominant right circulation was associated with a lower operative and 30-day mortality but the follow-up mortality was the same as in patients with a dominant left circulation.

The need for emergency surgery in our series reflected the clinical instability and/or severity of LMCA stenosis. As expected, the intraoperative mortality was higher for emergency cases. After the diseased coronary arteries were successfully bypassed, the risk paralleled that for urgent or elective surgical treatment.[32,38-40]

The life expectancy and functional classification of the patients in this group were quite satisfactory. Actuarial analysis of all patients who survived the surgical procedure and subsequent hospitalization showed the probability of survival throughout the years of study to be 80.3%, a normal life expectancy. Survival of a normal population matched to our study group by age, sex, and race was 78.8% from 1972 to 1980.[41] (Figure III.) Of the 240 surviving patients, 96 had returned to functional Class I or II by February, 1982. Even patients with poor or very poor left ventricular function had a 95% chance of returning to Class I or II after recovery from surgery. (Figure IV.) These results are encouraging.

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References 1. Judkins MP: Selective arteriography. A percutaneous transfemoral technic. *Radiology* 89:815-24, 1967. 2. Proudfit WL, Shirey EK, Sones FM Jr: Distribution of arterial lesions demonstrated by selective coronary cinearteriography. *Circulation* 36:54-6, 1976. 3. Murphy ES, Rosch J, Boicourt OW, et al: Left main coronary artery spasm. A potential cause for angiographic misdiagnosis of severe coronary artery disease. *Arch Intern Med* 136:350-1, 1976. 4. Khaja F, Sharma SD, Easley RM, et al: Left main coronary artery disease. Risk of catheterization, exercise testing, and surgery. *Circulation* 50(suppl II):136-40, 1974. 5. Lavine P, Kimbiris D, Segal BL, Linhart JW: Left main coronary artery disease. Clinical, arteriographic, and hemodynamic appraisal. *Am J Cardiol* 30:791-6, 1972. 6. Lansing AM, Masri ZH, Girardet RE: Coronary bypass grafts. Current indications and experience. *J Ky Med Assoc* 74:388-92, 1976. 7. Lansing AM, Masri ZH, Girardet RE, Nawab SM: Hospital mortality and morbidity for open heart surgery. *J Ky Med Assoc* 79:269-74, 1981. 8. Hutter AM Jr: Is there a left main equivalent? *Circulation* 62:207-11, 1980. 9. Gould KL, Lipscomb K: Effects of coronary stenoses on coronary flow reserve and resistance. *Am J Cardiol* 34:48-55, 1974. 10. Alford WC Jr, Page HL Jr, Burrus GR, et al: Further evaluation of the surgical treatment of obstructive disease of the left main coronary artery. *Ann Surg* 187:658-64, 1978. 11. Campeau L, Corbara F, Crochet D, Petitclerc R: Left main coronary stenosis. The influence of aortocoronary bypass surgery on survival. *Circulation* 57:1111-5, 1978. 12. Talano JV, Scanlon PJ, Meadows WR, et al: Influence of surgery on survival in 145 patients with left main coronary artery disease. *Circulation 52* (suppl II):105-11, 1975. 13. McConahay DR, Killen DA, McCallister RB, et al: Coronary artery bypass surgery for left main coronary artery disease. *Am J Cardiol* 37:885-9, 1976. 14. Oberman A, Kouchoukos NT, Harrell RA, et al: Surgical versus medical treatment in disease of the left main coronary artery. *Lancet* 2:591-4, 1976. 15. Takaro T, Herbert HN, Lipton MJ, et al: The VA cooperative randomized study of surgery for coronary arterial occlusive disease. II. Subgroup with significant left main lesions. *Circulation 54* (suppl III):107-17, 1976. 16. Jones EL, King SB III, Craver JM, et al: The spectrum of left main coronary artery disease. Variables affecting patient selection, management, and death. *J Thorac Cardiovasc Surg* 79:109-16, 1980. 17. Zeft HJ, Friedberg HD, King JF, et al: Reappearance of anterior QRS forces after coronary artery bypass surgery. *Am J Cardiol* 36:163-8, 1975. 18. Lim JS, Proudfit WL,

Sones FM Jr: Left main coronary arterial obstruction. Long-term follow-up of 141 nonsurgical cases. *Am J Cardiol* 36:131-5, 1975. 19. Cohen MV, Gerlin R: Main left coronary artery disease. Clinical experience from 1964-1974. *Circulation* 52:275-86, 1975. 20. Kisslo J, Peter R, Behar V, et al: Left main coronary artery stenosis. *Circulation 47 and 48* (suppl IV and V):57, 1973. 21. Kennedy JW, Kaiser GC, Fisher LD, et al: Clinical and angiographic predictors of operative mortality from Collaborative Study in Coronary Artery Surgery (CASS). *Circulation* 63:793-802, 1980. 22. Girardet RE, Masri ZH, Lansing AM: Open heart surgery in patients over 70 years of age. Mortality and morbidity. *J Ky Med Assoc* 79:337-46, 1981. 23. Oldham HN, King Y, Bartel AG, et al: Risk factors in coronary artery bypass surgery. *Arch Surg* 105:918-23, 1972. 24. Keon WJ, Bedard P, Akyurekli Y, et al: Causes of death in aortocoronary bypass surgery. Experience with 1000 patients. *Ann Thorac Surg* 23:357-60, 1977. 25. Kouchoukas NT, Kirklin JW, Oberman A: An appraisal of coronary bypass grafting. *Circulation* 50:11-16, 1974. 26. McNeer J, Starmer C, Bartel A, et al: The nature of treatment selection in coronary artery disease. *Circulation* 49:606-14, 1974. 27. Hammermeister KE, DeRouen TA, Murray JA, et al: Effect of aortocoronary sapheonous vein bypass grafting on death and sudden death. *Am J Cardiol* 39:925-34, 1977. 28. Tyras DH, Barner HB, Kaiser GC, et al: Long-term results of myocardial revascularization. *Am J Cardiol* 44:1290-6, 1979. 29. Chaitman BR, Bourassa MG, Heitz A, et al: Influence of left ventricular function and other parameters on early and late mortality following coronary bypass surgery. *Can J Surg* 20:119-26, 1977. 30. Alford WC Jr, Shaker IJ, Thomas CS Jr, et al: Aortocoronary bypass in the treatment of left main coronary artery stenosis. *Ann Thorac Surg* 17:247-53, 1974. 31. Collins JJ Jr, Cohn LH, Sonnenblick EH: Determinants of survival after coronary artery bypass surgery. *Circulation 47 and 48* (suppl III):III-132-6, 1973. 32. Loop FD, Berrettoni JN, Pichard A, et al: Selection of the candidate for myocardial revascularization. A profile of high risk based on multivariate analysis. *J Thorac Cardiovasc Surg* 69:40-51, 1975. 33. Cohen MV, Cohn PF, Herman MV, et al: Diagnosis and prognosis of main left coronary artery obstruction. *Circulation 45* (suppl I):57-65, 1972. 34. Loop FD, Lytle BW, Cosgrove DM, et al: Arteriosclerosis of the left main coronary artery. Five years' results of surgical treatment. *Am J Cardiol* 44:195-201, 1979. 35. Mundth ED, Harthorne JW, Buckley MJ, et al: Direct coronary revascularization. Treatment of cardiac failure associated with coronary artery disease. *Arch Surg* 103:529-34, 1971. 36. Norris RM, Agnew TM, Brandt PWT, et al: Coronary surgery after recurrent myocardial infarction. *Circulation* 63:785-92. 37. Kitamura S, Echavarria M, Kay JH, et al: Left ventricular performance before and after removal of the noncontractile area of the left ventricle and revascularization of the myocardium. *Circulation* 45:1005-17, 1972. 38. Conti CR, Brawley RK, Griffeth LS, et al: Unstable angina pectoris. Morbidity and mortality in 57 consecutive patients evaluated angiographically. *Am J Cardiol* 32:745-50, 1973. 39. Berk G, Kaplitt M, Padmanabhan V, et al: Management of preinfarction angina. Evaluation and comparison of medical versus surgical therapy in 43 patients. *J Thorac Cardiovasc Surg* 71:110-7, 1976. 40. Cascade PN, Wajszczuk WJ, Rubenfire M, et al: Patient selection for cardiac surgery in left ventricular power failure. *Arch Surg* 110:1363-7, 1975. 41. Personal communication, J. Gregory Robinson, M.A., demographic statistician, United States Bureau of the Census, Washington, D.C.

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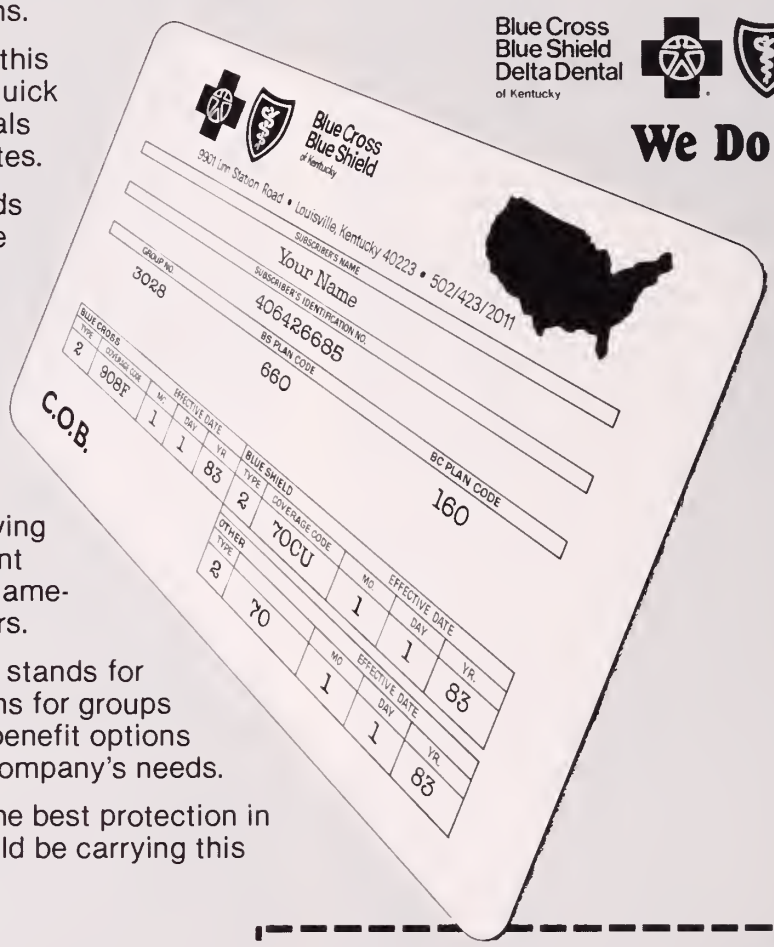
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Carcinoid Tumor of the Small Intestine

DONALD J. OSCHWALD, M.D. and WARD O. GRIFFEN, JR., M.D., Ph.D.

This paper is a report of a patient with a carcinoid syndrome and a review of the entity as presented at a recent Surgical Grand Rounds at the University of Kentucky. The patient had a small primary tumor of the ileum and a 12 centimeter hepatic metastasis, both of which were removed. Her preoperative urinary 5HIAA was 45/mg/24 hours (normal < 6 mg/24 hours). The patient's postoperative course substantiates the fact that complete removal of the carcinoid tissue, as demonstrated by a postoperative 5HIAA of 1.6 mgs/24 hours, will relieve the symptoms of the carcinoid syndrome completely.

SMALL bowel tumors, benign and malignant, are rare. Carcinoid tumors of the small intestine represent a significant proportion of those neoplasms. Because of the development of the carcinoid syndrome after hepatic metastases occur, these tumors have an additional fascination. A recent case of the carcinoid syndrome prompted this report.

Case Report

In 1980, when this patient was 59-years-old, the patient was admitted to a hospital because of right upper quadrant pain. She also gave a history of diarrhea and episodic facial flushing. An abdominal mass was palpable on physical examination. At exploration during that hospitalization, the gallbladder was removed and a 5 cm. tumor was excised from the edge of the right lobe of the liver. Postoperatively the patient was informed that she had an additional tumor in the right lobe of the liver, but there had been no other evidence of a tumor in the gastrointestinal tract.

In August 1982, she was seen as an outpatient at the University of Kentucky Medical Center for the first time with complaints of persistent diarrhea, episodic facial and upper chest flushing, and a weight loss of 20 pounds. On physical examination there was hepatomegaly, and a 24-hour urine for five-hydroxyindolacetic acid (5-HIAA) was elevated at 45 mg/24 hours (normal < 6 mgs/24 hours). Therefore, she was admitted with the diagnosis of carcinoid syndrome due to hepatic metastases from an occult primary carcinoid tumor. Physical examination demonstrated a well-healed midline incision and an enlarged liver which was firm and smooth. In addition, there was a holosystolic murmur at the right sternal border and a second mid-systolic murmur over the pulmonic area. Arteriography demonstrated a large hypovascular mass occupying almost the entire right lobe of the liver and an area of dense flush in the right lower quadrant thought to represent the primary tumor (Figure 1). At celiotomy the following day, the patient was found to have a large mass in the right lobe of the liver with necrotic center and a one cm. firm tumor of the terminal ileum with one obvious involved mesenteric lymph node. A right hepatic lobectomy and resection of the terminal ileum and cecum with adjacent mesentery followed by an end-to-end ileocolostomy was performed. Because the tumor mass involved the diaphragm, it was necessary to remove a portion of the right diaphragm, and therefore two thoracostomy tubes were placed at the time of the operation. The patient's postoperative course was characterized by some temperature elevation and ileus for about five days. However, both of these cleared without further difficulty. The histologic picture was compatible with a primary carcinoid of the terminal ileum with metastases to regional lymph nodes and liver.



Fig. 1: Selective angiographic evaluation of the superior mesenteric artery. Arrow denotes area of suspicion in right lower quadrant.

Because of some spillage of necrotic tumor at the time of hepatic resection, the medical oncology service was consulted and recommended postoperative chemotherapy. However, the patient declined to have this therapy, and was discharged on her 14th postoperative day. On the day prior to her discharge, another 24-hour urine for 5-HIAA was returned as 1.6 mg/24 hrs.

Out of the hospital her postoperative recuperation continued to be smooth. Her diarrhea disappeared as did the episodic flushing episodes she had been experiencing in the past. When last seen in March 1983, she had gained 10 pounds since discharge and except for some mild flatulence, was without symptoms.

Discussion

History: The historical events surrounding carcinoid tumors can be divided into three phases: 1) anatomical pathology; 2) pharmacology; and 3) the carcinoid syndrome. In 1838, Merling first described the histologic appearance of the tumor. Lubarch in 1880 clearly demonstrated that it arises from the crypts of Leberkuhn in the mucosa of the small intestine, and in 1890 Ransom described metastases from a carcinoid tumor. In 1897, Kulschitzky further characterized the cells in the crypts as secretory in nature, and these cells retain his name as their eponymic designation. In 1907 Oberndorfer coined the term *Karzinoide*, meaning a benign-acting tumor that looks like a carcinoma. In 1910, Huebschmann first recognized the chromaffin cell of the intestinal mucosa as the site of origin, and in 1914, Gosset and Mason described silver impregnation of intracytoplasmic granules in tumor cells and coined the term argentaffin tumor because of its affinity for silver.

In 1906 Ciaccio suggested that the tumors had biochemical activity perhaps due to epinephrine release. It wasn't until 1948 that serotonin was isolated from beef serum by Rapport. Then quickly Hamlin and Fisher in 1951 synthesized serotonin; in 1952 Erspamer and Asero found serotonin in the Kulschitzky cells; and in the same year Biorck, *et al* described the first functioning carcinoid tumor. A year later Limbeck extracted serotonin from carcinoid tumor and at the same time several investigators independently described the carcinoid syndrome. In 1955 Sjoerdsma and his co-workers described 5-HIAA in the urine of patients with the carcinoid syndrome, and five years later they illustrated a pathway of serotonin production and its breakdown to 5-HIAA. In 1962 Robertson, *et al* noted that serotonin injection did not produce the typical flush of the carcinoid syndrome. It remained for Oates, *et al*, in 1964, to demonstrate that kallikrein was present in carcinoid tumors, and it was this enzyme which released various plasma kinins capable of producing many of the extra-intestinal symptoms associated with the carcinoid syndrome.

In 1931 Cassidy first referred to the carcinoid syndrome. In 1943 and 1952 Hellman and Bjork described the cardiac lesions which were associated with the carcinoid syndrome. Finally, in 1953 Isler and Hedinger and Rosenbaum independently reported the association between the valvular lesions of the heart and the cutaneous flushing associated with carcinoid tumors. By 1966 Postlethwaite was able to report on 139 cases in the entire world literature.

Diagnosis: The initial symptoms associated with gastrointestinal carcinoids include nausea and vomiting, anorexia, constipation, abdominal pain, and most prominently intermittent diarrhea. The latter symptom is most likely due to serotonin, some of which escapes hepatic degradation, rather than kinin breakdown. Once hepatic metastases occur, the carcinoid syndrome ensues.

Because of the serotonin excess, the diarrhea becomes

constant leading to malabsorption, weight loss, and hypoalbuminemia. Episodic cutaneous flushing of the head, neck, and upper torso occurs and is often precipitated by excitement, exertion, or ingestion of alcohol and other foods. Asthmatic attacks and bronchospasm are usually short-lived, but can be incapacitating. Eventually in far-advanced disease cardiac valvular lesions, especially the tricuspid valve, occur. The combination of tricuspid insufficiency and hypoalbuminemia lead to severe dependent edema.

In order to make the diagnosis before hepatic metastases have occurred, one must have a high index of suspicion. If the diagnosis is entertained, the first step should be examination of a 24 hour urine for 5-HIAA. The diagnostic modalities to detect the primary lesion include small bowel contrast roentgenograms which are usually not helpful because the tumor is small. Abdominal ultrasonography has been disappointing in identifying the lesion, but CT scanning has been more productive. Because the tumor tends to be vascular, angiography has been quite helpful in localizing the primary lesion.

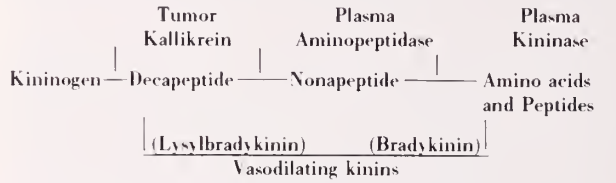
Pathology: The typical carcinoid tumor is a small, relatively firm nodule in the submucosal position which is usually yellow on cut surface. They grow slowly and have been described as "cancer in slow motion," because they all have the potential of metastatic spread. Two forms of carcinoid tumor have been distinguished by their reaction to fixation. The typical argentaffin tumor has cells with intracytoplasmic granules that contain serotonin and other pharmacologically active substances. When these are fixed in formaldehyde, a reducing complex is formed which when exposed to silver salts produces metallic silver which precipitates within the cells. In contrast are the argyrophil tumors which do not form a reducing complex when the tumors are fixed in formaldehyde. However, if silver salts and a reducing agent are added after fixation in formaldehyde, metallic silver is then deposited on the granules. In general, these histochemical reactions are correlated with the location of the tumor in the gastrointestinal tract as well as the likelihood of producing the carcinoid syndrome. For example, carcinoid tumors of foregut derivation, *eg* lung, thymus, stomach, pancreas, and duodenum, are typically argyrophil and rarely associated with carcinoid syndrome. Carcinoid tumors of the midgut, *eg* jejunum, ileum, appendix, and right colon, typically contain argentaffin granules and may be associated with a carcinoid syndrome. Hindgut tumors, *eg* left colon and rectum, are neither argyrophil or argentaffin and are rarely associated with the carcinoid syndrome.

Microscopically an interesting feature of the most common carcinoids of the gastrointestinal tract, namely those of the small bowel and appendix, shows striking differences. For example, carcinoids of the small bowel show a 66% rate of invasion microscopically as compared to 29% for appendiceal carcinoids. As might be expected, then, the metastatic rate in these two groups are entirely different; 37% with small bowel carcinoids as compared to 6% with appendiceal carcinoid. Thus, in looking at the five and 10 year survival data, the jejunoileal carcinoids have a 57 and 45% five and 10 year survival rate as compared to an 80 and 76% five and 10 year survival rate for appendiceal carcinoids.

Metabolic Pathway: Because the human cannot synthesize the indole ring, the amino acid tryptophan is an essential amino acid obtained from tomatoes, bananas and meat. The normal metabolic pathway of tryptophan produces predominately nicotinic acid with only about 1% of the tryptophan resulting in serotonin, a major biochemical product of carcinoid tumors. However, these tumors may divert up to 60% of dietary tryptophan to serotonin. Ordinarily when serotonin is released into the bloodstream in small amounts, it is rapidly bound to platelets; and free serotonin is metabolized predominantly in the liver but also in the lungs to 5-hydroxyindolacetic acid which is excreted in the urine. Since the venous effluent of small intestinal carcinoids goes through the liver, the effect of serotonin in patients with carcinoid tumors is minimal until hepatic metastases have occurred. It is likely that the intermittent diarrhea seen early is caused by the hepatic overload of excess serotonin.

The cutaneous flushing seen with carcinoid tumors is probably not due to serotonin. The evidence that serotonin is not involved in flushing is shown by: 1) patients with this symptom often do not have elevated serotonin levels in their serum; 2) serotonin infusion either will not induce flushing or the flushing produced is different from that suffered by the patient; and 3) serotonin antagonists often are ineffective in alleviating carcinoid flushing. On the other hand, bradykinin has been implicated: 1) intravenous administration of bradykinin will produce cutaneous erythematous flushing and even hypotension; 2) vasodilating kinins have been found in hepatic venous blood draining carcinoid metastases; and 3) kallikrein, which is an enzyme that

releases bradykinin, has been demonstrated in carcinoid tumors. The pathway is as follows:



Treatment: The treatment of small intestinal carcinoid is excision with generous lymphadenectomy. Because appendiceal carcinoids have a low incidence of valcular invasion as well as metastatic disease, an appendectomy with removal of the mesoappendix often suffices for carcinoid tumors of 1½ cms. or less in size. However, if there is obvious invasion or if the lesion is large, excision of the terminal ileum and cecum with a portion of ascending colon is indicated. When hepatic metastases have occurred, even if a primary intestinal carcinoid cannot be found, attempts should be made to remove the bulk of the tumor if not all of it, particularly if the patient is having serious symptoms from the carcinoid syndrome. Removal of a large portion of the tumor will often relieve the patient of symptoms and will favor the eradication of the tumor with adjuvant chemotherapy. Radiation therapy probably is of little value, but drugs which have shown some success against carcinoid tumors particularly in combination are cyclophosphamide, 5-fluorouracil, and more recently streptozotocin.

References 1. Wilson H, Cheek RG, Sherman RT, Storer EH. Carcinoid tumors. *Curr Probl Surg* 1970: (Nov) 1-51. 2. Herbsman H, Wetstein L, Rosen Y, Orces H, et al. Tumors of the small intestine. *Curr Probl Surg* 1980: (Mar) 155-163.

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EDITORIAL

How Does One Decide Whether To Build Another Cancer Center?

JOHN S. SPRATT, M.D.

The Cancer Committee of the KMA recently heard reports from several cancer center directors and entered into an extended discussion of "how many cancer centers does Kentucky need?" As was pointed out, the current building construction for the various cancer centers plus programmatic costs for various cancer service, research and teaching programs is rapidly making cancer one of the Commonwealth's highest cost health programs. Because of past experience in planning centers and a general knowledge of cancer epidemiology, the author was asked to write this editorial to be reviewed and endorsed by the Cancer Committee before publication. The editorial will not answer the final question, "How many cancer centers does Kentucky need?" Rather, the editorial stresses some basic factors that must be considered before any group would attempt to launch or sustain a cancer center.

The Committee was concerned about the ability of existing and proposed centers to generate sufficient utilization for quality, cost-effective service. Whether all these centers will be financially viable is an important question. The discussion below identifies basic data needed for a model to estimate the need and projected utilization of cancer units in Kentucky.

The basic parameters include:

1. **Population Size and Growth**

 Within Kentucky, official population projections are provided by the Urban Studies Center of the University of Louisville, and the U. S. Bureau of the Census.

2. **Cancer Incidence Rates**

 Specific cancer incidence rates for Kentucky by major sites (female breast, colon-rectum, etc.) are available through the National Cancer Institute. Incidence rates may vary by geographical area, but are relatively stable over time. Kentucky has an estimated mortality rate from cancer of 110 per 100,000, for about 6,800 deaths in 1982. There were about 13,000 new cases roughly distributed as follows: female breast, 1400; colon and rectum, 1800; lung, 2300; oral, 550; uterus, 950; prostate, 1200; stomach, 275; pancreas, 375; and leukemia, 400. Roughly one-third of all cancer deaths are now from lung cancer.

3. **New Cancer Cases Per Year for a Service Population of Known Size**

 This value can be determined by multiplying projected population size for a service area by the cancer incidence rate, expressed as new cancer cases per 100,000 population. Because the number of new cancers occurring annually in a population is relatively constant, knowing the approximate expected number of new cancer cases per year that a cancer unit or practitioner might see in a specific population is a very critical consideration in planning.

4. **Distribution of Cancer Treatment Modalities**

 New cancer patients may be subdivided into those requiring radiation therapy, surgery, chemotherapy/hormones, combinations of the above and no definitive therapy. Statistics available through the National Cancer Institute indicate that 30.7% of all new cases identified between 1970 and 1973 utilized radiation therapy. This percentage is subject to variation as methods of cancer treatment change over time and as patterns for cancer treatment are established within a particular geographic area. It also varies with treatment philosophy since results can be obtained by several methods of treatment.

TABLE 1

Incidence Weighted Distribution of Cancer Treatment Modalities, United States, 1970-1973

	TREATMENT MODALITY GROUP			
	Surgery	Radiation Therapy	Chemo-therapy/ Hormones	No Definitive Therapy
White Patients	57.9	30.7	22.4	11.3
Black Patients	45.3	29.9	25.7	16.9

SOURCE: *Cancer Patient Survival, Report Number 5*, SEER Program, National Cancer Institute, 1976.

Adapted from: *Cancer Patient Survival Report Number 5*, SEER Program, National Cancer Inst. 1976.

5. **Number of New Cases by Treatment Method**

 This is calculated by multiplying the number of new cancer cases projected for an area by the percentage of new cases where a particular therapy is selected as a treatment modality. For any cancer unit there must be a confirmed need to insure cost-effective and self-sustaining need for a specific modality at a specific cancer unit.

6. **Market Share of New Cases**

 The number of new cases from a defined geographic area will be treated by one or more providers serving that area. Market share is calculated by dividing the number of new cases which a provider serves from an area by the total number of new cases from that geographic area. The entry of a new provider of services within an area will diminish the market share of other providers, unless the market is expanded by increasing the percentage of new cases receiving a particular therapy or providing more treatments per new cancer case.

7. **Provider Case Load**

 This is calculated by multiplying the number of new cases for a specific geographic area by a provider's market share of these new cases.

8. **Number of Procedures per New and Follow-Up Cancer Cases**

 Statistics are available for determining the average number of procedures per new cancer case, the proportion of new cancer cases requiring follow-up procedures and the number of procedures per follow-up case. As would be expected, these parameters are subject to great variation and further refinement according to the type of services located within various cancer centers.

9. **Projected Utilization per Cancer Unit**

 The projected demand per cancer center may be calculated by multiplying the above parameters together. Actual future utilization will vary from these projections according to the variance of these parameters from the original assumptions.

An empirical model for defining markets for cancer treatment is presented below. Based on available data concerning service area population characteristics, residential patterns for seeking health services, cancer incidence rates and treatment modality use rates, the model allows predictions of future demand and utilization of cancer services under varying assumptions.

The first step taken is to predict the total market for cancer care for the area served by the proposed center. The assumptions utilized in defining this market can then be tested to determine adjustments needed to reflect other variables impacting upon demand and utilization. For example, it is known that considerable cancer care is performed at community hospitals and by private practitioners within their offices. As more information becomes available, adjustments for markets served can be made.

The population at risk for cancer care is derived from the following assumptions:

1. The service area for cancer care.
2. Intrastate providers treat 100% of all cancer patients from primary and secondary service areas and 20% from a defined tertiary service area.
3. Population projections by service area can be derived from official population estimates published by the Urban Studies Center, University of Louisville (for Kentucky) and the Indiana State Board of Health (for Indiana). Data are also available for other adjoining states.
4. Out-of-area patient origin for total cancer patients as derived from institutional patient origin for new cancer cases.
5. Estimates of cancer incidence/200,000 population utilize national rates for white and non-white populations (Source: Biometry Branch, National Cancer Institute). Specific rates may be applied for Kentucky and Indiana populations and by major sites (female breast, colon-rectum, etc.).

The number of new cancer cases by service area can then be calculated.

The demand for cancer treatment services may be derived by estimating the number of treatments for new and follow-up cancer cases according to treatment modality. Table 1 displays the relative distribution by modality group (surgery, radiation therapy, chemo-

therapy/hormones and no definitive therapy). Proportions exceed 100% because some patients undergo multiple treatment modalities. These data do not include diagnostic and rehabilitative services unique to cancer.

The demand for cancer treatment is defined as the number of procedures per treatment modality multiplied by the number of new and follow-up cancer cases per year.

Further development of the model, and testing of the assumptions therein, can be made as further research is conducted on patterns of cancer care within a particular service area. Areas for further examination include:

1. Conducting an inventory of available cancer treatment resources and their utilization.
2. Defining customary courses of treatment for surgery; chemotherapy/hormones and other specialized services.
3. Identifying trends in cancer care by treatment modality since 1974.
4. Considering the objectives and capabilities of various programs in meeting the total needs of cancer patients from prevention through rehabilitation in the population of Kentucky.
5. Considering other obligations a particular center might have for education and research and area prevention programs.

The total scope ranges from the first contact physician through terminal care in the home for the uncured. Effective use and compliance requires an educated public living in an environment with minimum exposure to known carcinogens. For example, at least one-third of all the cancer deaths, *ie*, from lung cancer, are probably preventable by more effective public health education.

Obviously, the primary question of the Cancer Committee, "How many cancer centers does Kentucky need?" has not been answered. This omission is intentional. The basic considerations have been spelled out and needs may vary over time. A really beneficial center must justify its existence on a long-term basis by longitudinal audits in the served population confirming improved end results and a sustained reduction in the magnitude of the cancer problem in the served population. This is a long-term data management and analysis problem inherently obligated to any cancer unit, center or practitioner.

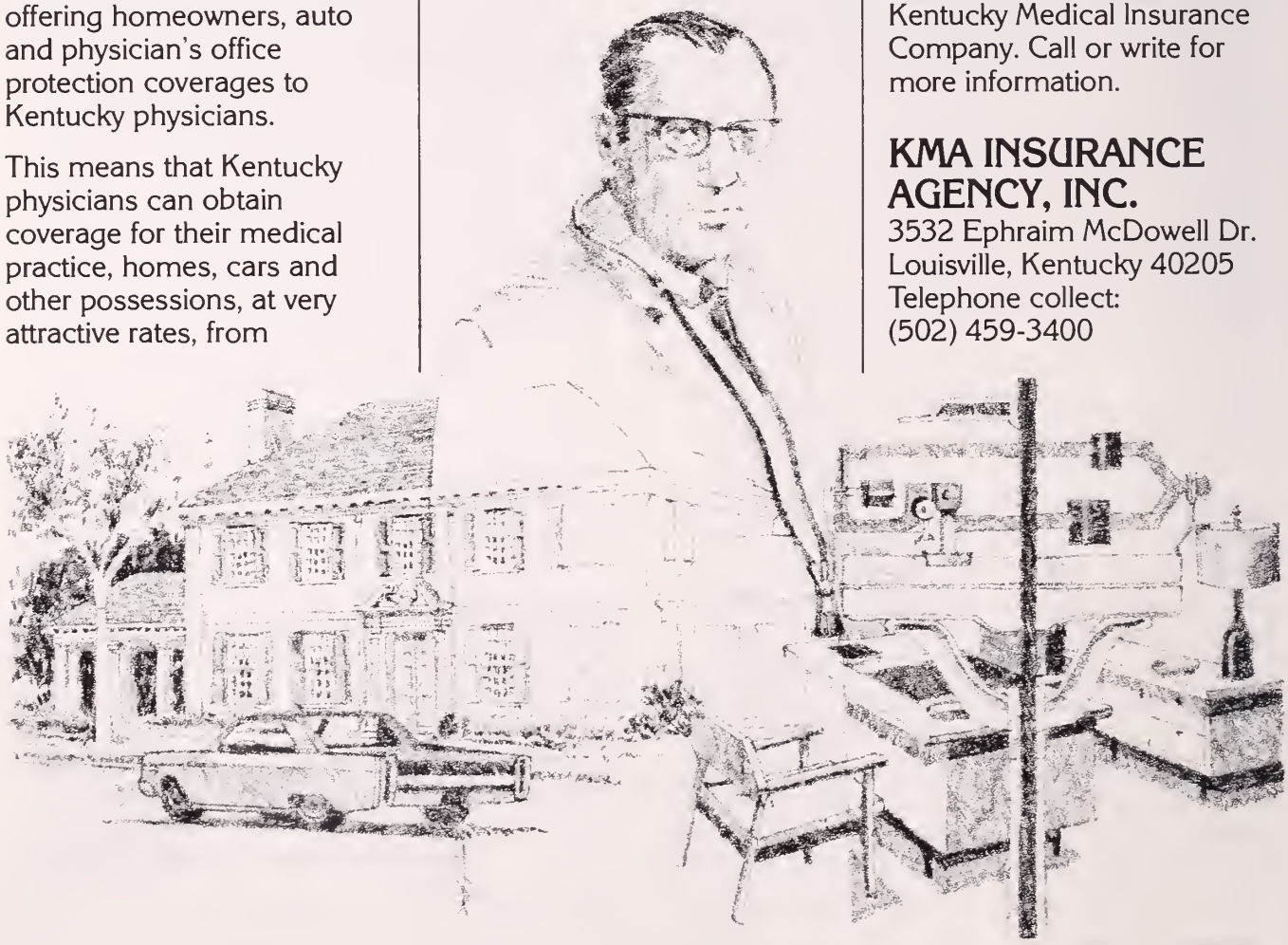
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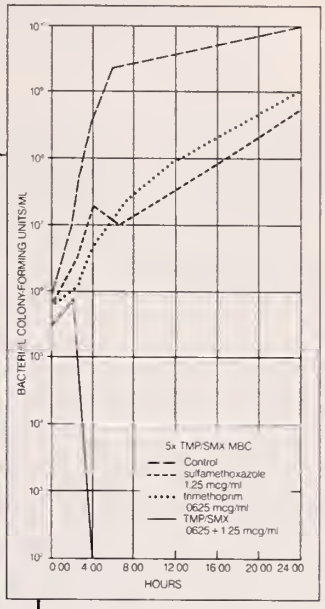
Bactericidal activity with minimal resistance

Percent of isolates of common uropathogens sensitive to BACTRIM and to other antimicrobials

	Escherichia coli	*Klebsiella pneumoniae*	*Proteus mirabilis*	*Proteus vulgaris*	*Proteus* sp.	*Enterobacter* sp.	*Enterobacter aerogenes*	*Enterobacter cloacae*
BACTRIM	96% 328,598	89% 63,551	93% 62,691	84% 4174	91% 4381	88% 1736	96% 7326	92% 11,856
ampicillin	72% 345,209	5% 65,466	85% 67,338	16% 4381	70% 4402	10% 1775	9% 7759	11% 12,091
cephalexin†	81% 343,339	85% 67,031	92% 67,027	16% 4398	80% 4365	22% 1834	13% 7571	12% 11,846
nitrofur-antoin	97% 307,785	65% 61,162	7% 59,775	13% 3848	14% 3059	67% 1707	60% 7109	67% 10,830

†Analogous to cephalothin, the primary antibiotic disc used in testing.
Source: The Bacteriologic Report, BAC-DATA Medical Information Systems, Inc., Winter Series, 1981-82.
Numbers under percentages refer to the projected number of isolates tested.

RAPID *IN VITRO* DESTRUCTION OF *E. COLI**



Kill curve kinetics of Bactrim and its individual components against *E. coli in vitro*.[1]

The bactericidal action of Bactrim has been demonstrated *in vitro* on laboratory strains of *E. coli*[1,2] and on clinical isolates of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis* and *Morganella morganii*[3]—the most common causative organisms of urinary tract infections.[4] More than 100 published studies attest to the efficacy of Bactrim in recurrent urinary tract infections due to these organisms.[5] In comparative studies with other antimicrobials, Bactrim has consistently demonstrated unsurpassed efficacy during therapy.[6-11]

Resistance to Bactrim develops more slowly than to either of its components alone *in vitro*.* Among urinary tract isolates, resistance has rarely emerged in susceptible strains.[5,12] Bactrim is contraindicated in pregnancy at term, during lactation, in infants less than two months old and in documented megaloblastic anemia due to folate deficiency.

Initial episodes of uncomplicated urinary infections should be treated with a single-agent antimicrobial.

Bactrim™ DS

(trimethoprim and sulfamethoxazole/Roche)

b.i.d. *for recurrent urinary tract infections*

**In vitro* data do not necessarily predict clinical results.

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See next page for references and a summary of product information.

References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Kramer MJ, Maunz YR, Robertson TL, Timmes MD: Morphological studies on the effect of subinhibitory and inhibitory doses of sulfamethoxazole-trimethoprim combination on *Escherichia coli*. Presented at the 12th International Congress of Chemotherapy, Florence, Italy, Jul 19-24, 1981. 3. Spicehandler J *et al: Rev Infect Dis* 4:562-565, Mar-Apr 1982. 4. Stamey TA: *Pathogenesis and Treatment of Urinary Tract Infections*. Baltimore, Williams & Wilkins, 1980, p. 13. 5. Ronald AR: *Clin Ther* 3:176-189, Mar 1980. 6. Cooper J, Brumfitt W, Hamilton-Miller JMT: *J Antimicrob Chemother* 6:231-239, 1980. 7. Gower PE, Tasker PRW: *Br Med J* 1:684-686, Mar 20, 1976. 8. Cosgrove MD, Morrow JW: *J Urol* 111:670-672, May 1974. 9. Iravani A *et al: Antimicrob Agents Chemother* 19:598-604, Apr 1981. 10. Schaeffer AJ, Flynn S, Jones J: *J Urol* 125:825-827, Jun 1981. 11. Rous SN: *J Urol* 125:228-229, Feb 1981. 12. BAC-DATA Medical Information Systems, Inc., Bactenologic Reports, Winter Senes, 1976-82.

Bactrim™ DS

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, hepatocellular necrosis, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients. *Pregnancy:* Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, hepatocellular necrosis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: *Not recommended for infants less than two months of age.*

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS:

Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets*, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per tea spoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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EDITORIAL

Windows

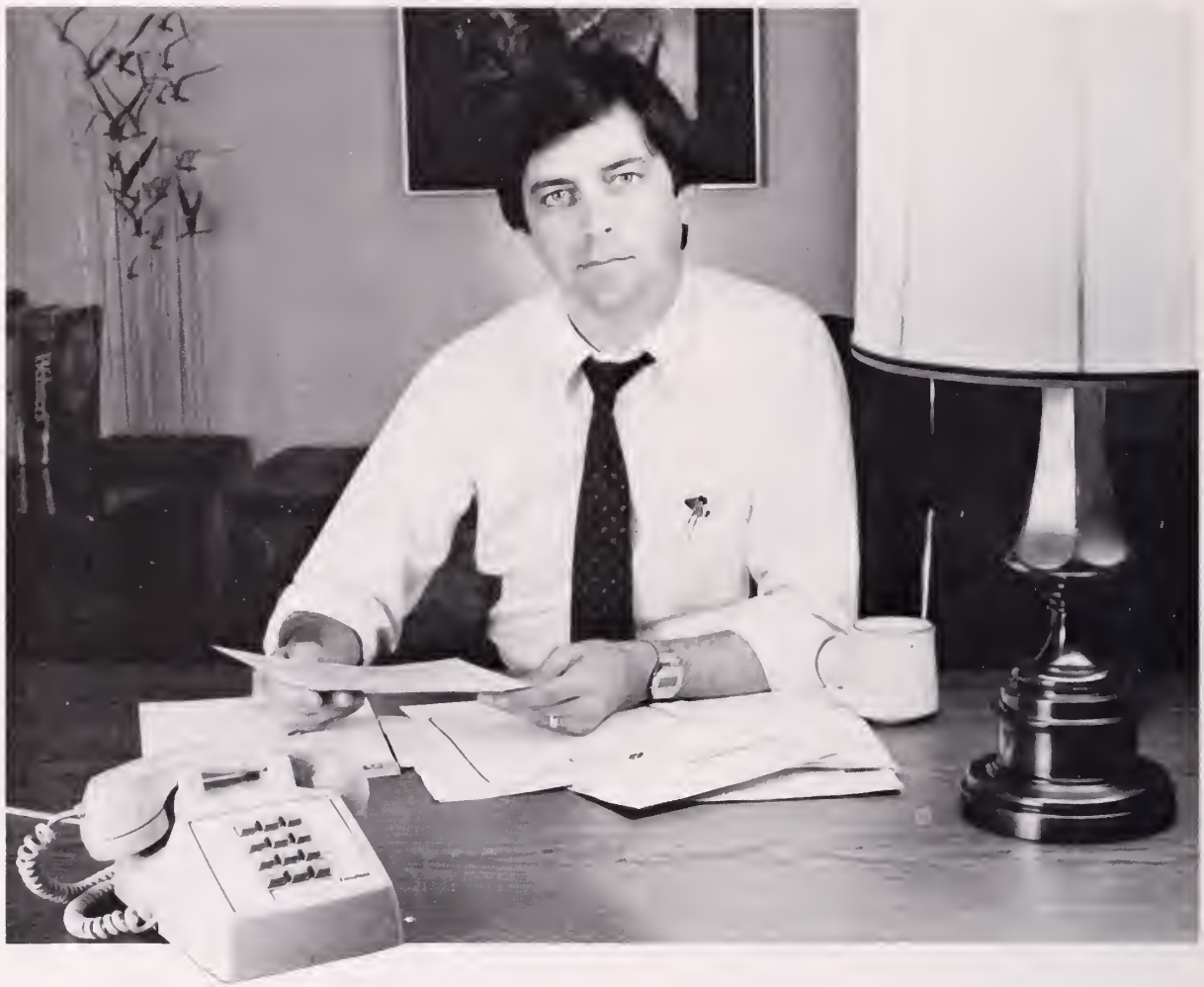
EACH of us has his own peculiar likes and dislikes. For example, I have an intense dislike of telephones that play music in my ear when the other party puts me on "hold." The music is usually horrible and I consider it a disconcerting invasion of my privacy. One thing I like is sidewalks and I deplore their absence in most post W. W. II subdivisions. Sidewalks promote safety and neighborliness. The real estate developers don't seem to see it that way. They would rather crowd in a few more lots than allow space for sidewalks.

When it comes to hospitals, the thing I really dislike is the absence of windows in certain work and patient care areas. I cannot comprehend the insensitivity of some architects to the importance of daylight to patients and nurses. The sensory stimulation of being able to look out the window is a significant factor in promoting a sense of well being, in increasing efficiency, and in decreasing fatigue. The sensory deprivation of constant enclosure without visual access to the outdoors has a subtle depressing and fatiguing effect. Prolonged exposure to fluorescent lights has been shown to produce pituitary dip function in experimental animals.

Schools of architecture must surely teach their students about the importance of the impact a building has upon the people who use it. Why, then, must we have intensive care units, labor rooms, *etc.* totally enclosed with no windows? Why must we have these areas in hospitals that are the same at noon as they are at midnight? How can a competent architect possibly place the only window in a hospital room as a narrow slit in the corner of the room at the head of the patients beds so that neither patient can look out the window without craning his neck? Why not place a larger window in a position where both patients can look out while lying in bed?

My point is that windows are important. My hope is that any readers of this who may be in a position to influence future hospital construction will consider it a point well taken.

McHenry S. Brewer, M.D.



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Initial Assessment of Craniocerebral Trauma

SALVATOR VICARIO, M.D. AND DANIEL F. DANZL, M.D.

CRANIOCEREBRAL trauma represents a considerable health problem in today's mechanized world. Head injury follows only heart disease, cancer and stroke as a leading cause of death. Morbidity and socioeconomic problems caused by even minor head injuries, with a Glasgow Coma Scale (GCS) 13-15, are significant.[1] The Glasgow Coma Scale has been advocated as an easy reproducible scoring scale for initial and subsequent assessment. It correlates with prognosis and the necessity of surgical intervention.

Initial extrication and assessment of the injured patient must be accomplished expeditiously. Any head injury patient has the potential for an associated cervical spine injury. Thus stabilization of the neck utilizing a manual traction method or splinting techniques (*ie;* spine board, Philadelphia collar®, collar roll) is vitally important prior to moving the patient.

After stabilization of the cervical spine, attention to the "ABC's" of emergency care is the physician's next priority. Airway control including nasotracheal intubation of unconscious victims and assisted ventilation to maintain the Pa CO_2 in the 25-30mm Hg range are essential. Proper cuff inflation in patients over seven years of age and insertion of a nasogastric (NG) tube are important to prevent aspiration pneumonia. If a basilar skull fracture is suspected, pass the NG tube orally. The severely head injured patient may be hypertensive secondary to elevated intracranial pressure (ICP) and the Cushing reflex. If the patient is hypotensive, assume significant blood loss. Volume replacement to restore normal blood pressure and control of bleeding are essential to support ischemic cerebral tissue. Elevation of the head in a neutral position results in a sustained reduction of intracranial pressure. The judicious use of either furosemide or mannitol after neurosurgical consultation may be useful in an effort to decrease ICP and to prevent uncal herniation.

Isolated severe head injury may also result in myocardial damage possibly from intense sympathetic stimulation.[2] Disseminated intravascular coagulation

Glasgow Coma Scale

Eyes	**Open**	**Spontaneously**	**4**
		To verbal command	**3**
		To pain	**2**
	No response		**1**
Best motor response	**To verbal command**	**Obeys**	**6**
	To painful stimulus	**Localizes pain**	**5**
		Flexion-withdrawal	**4**
		Flexion-abnormal (decorticate rigidity)	**3**
		Extension (decerebrate rigidity)	**2**
		No response	**1**
Best verbal response		**Oriented and converses**	**5**
		Disoriented and converses	**4**
		Inappropriate words	**3**
		Incomprehensible sounds	**2**
		No response	**1**
Total			**3-15**

can be precipitated by cranial trauma. It is induced by endothelial cell injury, tissue release of thromboplastin or red cell release of phospholipids.[3]

Some seriously injured head trauma patients will require treatment at a level I trauma center. The CT scan has evolved into an extremely reliable instrument for the diagnosis of subdural, epidural and intracerebral hematomata. Recent reports emphasize the need to strongly suspect such lesions in patients with head trauma and an altered mental status.[4] Localizing sensory or motor signs, anisocoria, or focal seizures require emergency evaluation. For example, there is evidence that improved survival results in those patients in whom a subdural hematoma is evacuated within four hours of injury.[5] Skull radiographs may be normal despite intracranial bleeding and should not be relied upon to rule out intracranial pathology.

Monitoring and aggressively treating elevated ICP may improve outcome in severely injured patients with a GCS 3-5, those with a lesion on CT, or those over 40 years of age or with localizing signs.[6]

In summary the rapid assessment and stabilization of the neuro-trauma patient are critical to optimize survival and recovery. A CT scan of the brain should be performed to identify surgically correctable lesions. While awaiting neurosurgical consultation maintain adequate oxygenation, ventilation and volume status.

References 1. Rimel RW, et al: Disability caused by minor head injury. *Neurosurgery* 9:221, 1981. 2. McLeod AA, et al: Cardiac sequelae of acute head injury. *Br Heart J* 47:221, 1982. 3. Clark JA, et al: Disseminated intravascular coagulation following cranial trauma. *J Neurosurgery* 52:266, 1980. 4. Vicario S, et al: Emergency presentation of subdural hematoma: A review of 85 cases diagnosed by computerized tomography. *Annual of Emergency Medicine* 11:475, 1982. 5. Seelig JM, et al: Traumatic acute subdural hematoma: Major mortality reduction in comatose patients treated within four hours. *NEJM* 304:1511, 1981. 6. Narayan RK, et al: Intracranial pressure: To monitor or not to monitor? A review of our experience with severe head injury. *J Neurosurgery* 56:650, 1982.

From The Department of Emergency Medicine, University of Louisville, Louisville, Kentucky 40292, at the request of the KMA Continuing Medical Education Committee.

Problems in the Control in Insulin-Dependent Diabetes Mellitus in Children

DUNCAN R. MACMILLAN, M.D., DEE DEAKINS, R.N., B.S.N., NANCY KUPPER, R.D., M.S. and MICHAEL B. FOSTER, M.D.

Management of the young person with insulin dependent diabetes mellitus represents a challenge to primary care physicians. Adequate physician time commitment, extensive use of specialized nutritionist and nursing personnel, and an understanding of the many pitfalls in diabetes care are essential.

THE discovery and isolation of insulin some 60 years ago and its rapid wide-spread availability brought reprieve for thousands of insulin dependent diabetics facing imminent demise and gave them the expectation of good health and a normal life span. The reprieve has withstood the test of time; the expectations of a normal, productive life have not.

Today the average child developing diabetes at age 10 years can expect to live only to age 55 in comparison to the expectation of over 70 years for non-diabetic children of similar age.[1] In addition, there is the likelihood of being debilitated prior to untimely death by blindness, coronary artery disease, end-stage renal disease and peripheral vascular disease during the period that should represent the most productive years. While new advances may alter this outlook for future generations, they may come too late for many of today's young diabetics unless better implementation of currently available modalities of diabetic control is accomplished.

In the past decade it has become apparent that good diabetic control may retard the microvascular and macrovascular complications of diabetes.[2] Good control by presently available methods may not be achievable in every person with insulin dependent diabetes, but intelligent use of insulin and dietary regimens combined with education and support from the physician and allied health professionals can greatly enhance the degree of control and improve the outlook for longevity and productivity.

Difficulties in achieving good control can relate to both inadequate and excessive doses of insulin, dietary mismanagement, and poor patient compliance. "Brittle diabetes" may exist as a discrete entity but is usually related to one or a combination of the above factors. Adequate investment of physician time in addition to the collaboration of specialized nursing and nutrition personnel is essential to the establishment and maintenance of good control. A closer examination of factors adversely affecting diabetic control follows.

COMMON ERRORS IN INSULIN DOSAGE

1. **Attempting to achieve initial control with insulin dosage adjustments made according to a sliding scale based on glycosuria.** The fallacy of this method of establishing insulin requirements lies in its "catch-up" approach, rather than providing insulin in anticipation of needs.[3] Initial dosing on a weight basis is less likely to lead to erroneous estimation of insulin need.
2. **Establishing tight control in hospitalized children, then using same dose after discharge.** If tight control is established in hospital, a 10-20% reduction in dose should be made on discharge to allow for increased exercise at home. It is more practical to get glycosuria in the ½% range in hospital and do the "fine-tuning" on an ambulatory basis.
3. **Attempting control of the pre-breakfast blood sugar with a single morning dose of interme-**

diate acting insulin. Under normal circumstances NPH and Lente insulins exert their peak activity in late afternoon; adjustments of these insulins should be made on the basis of pre-supper glycosuria or a late afternoon blood sugar determination. Attempts to control pre-breakfast hyperglycemia and glycosuria with morning NPH or Lente will usually result in mid-afternoon hypoglycemia with frequent rebound hyperglycemia later in the day. Poor early morning control generally is an indication for a second insulin injection in the evening.

4. **Setting an objective of moderate glycosuria.** The proper objective is aglycosuria without symptoms of hypoglycemia. This objective may not always be obtainable but should be the standard by which control is judged. Poor control is often deemed acceptable and is tolerated when less stringent objectives are defined.
5. **Basing insulin dosage on a single determination of blood sugar.** Blood sugars vary greatly in children even under apparently identical circumstances of insulin dose and food intake. The day a child visits a doctor's office may be quite atypical in terms of exercise and emotional stress. For this reason, patterns of glycosuria determined at home are a better gauge of the need for insulin change than an occasional blood sugar determination in the doctor's office.
6. **Infrequent insulin adjustments made only by the physician.** Children's needs for insulin vary from day to day. While it is not feasible to anticipate day to day variation, a consistent pattern of increased or decreased need over a period of several days as indicated by the degree of glycosuria should prompt a change in insulin dose. Ideally the patient should be on the lowest dose which maintains aglycosuria. After an initial period of supervision these changes can usually be made by conscientious parents or patients at the appropriate intervals without the need to check with the physician.
7. **Failure to reduce the appropriate insulin following a hypoglycemic reaction.** Repetition of episodes of hypoglycemia can be averted by decreasing the insulin dose responsible for a reaction. For patients receiving only a single AM injection of an intermediate acting insulin, a reaction at any time of day is an indication for reducing that insulin the following day. Identification of the culpable insulin in patients receiving mixed insulins or multiple shots is more complex but also is within the grasp of understanding of most patients or parents.
8. **Persisting with a one-shot program because of convenience or social pressures even though nighttime control is poor.** If good control of the pre-supper test is obtained but overnight control is poor, further increase in AM intermediate acting insulin may lead to afternoon hypoglycemia and often rebound hyperglycemia. In most instances the introduction of a second injection of intermediate-acting insulin mixed with regular is necessary to achieve good control. Many valid social reasons may be raised for trying to "get by" on one insulin injection but the physician is doing his patient a diservice in the long term by allowing him or her to continue on a program which fails to produce good control.
9. **Failure to recognize the usual remission or "honeymoon" phase following initial diagnosis of diabetes mellitus.** Requirements for insulin generally decline during the first 3 to 6 months after diagnosis of insulin-dependent diabetes. Adjustments need to be made frequently during this period. A dose of insulin which seems to provide good control on one occasion may be producing insulin reactions and rebound hyperglycemia a week later.
10. **Total dependance on glycosuria for regulating insulin dose.** While patterns of glycosuria are far superior to occasional blood sugar measurements in determining the appropriate insulin dose, optimal insulin dosing requires a program of home blood glucose monitoring.[4] Only with frequent blood sugar determinations in the home setting is the objective of aglycosuria safe and an objective of normoglycocemia feasible.

COMMON ERRORS IN DIETARY PRESCRIPTION:

1. **Allowance of a free diet.** The usual diabetic free diet excludes concentrated carbohydrates such as sugar, candy, regular soft drinks, *etc.* A completely free diet is totally incompatible with any reasonable degree of diabetic control. A diabetic "free diet" which permits the more complex carbohydrates to be consumed in any amount and distribution during the day does not permit meaningful interpretation of blood sugars or patterns of glycosuria and is not

consistent with good control. A constant carbohydrate or fixed calorie diabetic diet are essential for establishment of satisfactory control.

2. **Inappropriate calorie or carbohydrate assignment.** Dietary compliance quickly disintegrates if the child is not allowed sufficient intake for satiety or is required to eat more than he desires. This is less likely to be a problem with the constant carbohydrate diet where flexibility of protein intake may compensate for inappropriate carbohydrate allowance. For either type of diet a good dietary history is a more important basis for initial assignment of total calories or carbohydrate content than any formula computation. It is equally important to maintain dietary surveillance so that adjustments can be made for growth and changing activity patterns.
3. **Misassignment of Snacks.** It is impossible with currently available methods of insulin administration to arrange for peak periods of insulin activity to coincide with the three standard meals. All patients receiving intermediate acting insulin should have a mid-afternoon or afterschool snack to counter what is usually the peak period of activity for NPH and Lente insulins. Without a snack at this time it will generally be impossible to give enough intermediate acting insulin to afford good daytime control without producing late afternoon reactions. Patients receiving regular insulin in their morning shot should have a mid-morning snack to prevent hypoglycemic symptoms in the pre-lunch period. For patients on a two-shot program a bed-time snack is indicated but for those on a single morning shot of intermediate acting insulin, a bedtime snack may contribute to poor nighttime control and should not be routinely prescribed unless there is a history of nocturnal hypoglycemia.

THE PROBLEM OF POOR PATIENT COMPLIANCE

With the technology currently available, the insulin-dependent patient can be controlled no better than his determination will allow. However, it is easy to blame the patient for inadequancies of medical management. Every patient and parent has a right to be properly educated with respect to the nature of the disease, the most effective methods of controlling the disease, the essentials of self care and the consequences of poor control. Young patients should be given increasing responsibility for their dietary selection, urine testing, insulin injection and insulin dosage adjustment so that by the time they reach adolescence diabetes management becomes their "own thing" and not a focus of adolescent rebellion. Diabetes education is the key to patient compliance.

THE PROBLEM OF PHYSICIAN TIME COMMITMENT

"Dabbling in Diabetes" can add an extra dimension to even the busiest practice. Few other medical conditions offer the physician the opportunity to manage easily and apparently successfully an otherwise fatal metabolic disease. The physician caring for diabetic patients must however take the time to lead the young diabetic through the difficult period of acceptance of his disease, to communicate with both parents and patient, listening to their concerns and anxieties, to encourage and to continue the educational process begun at the time of diagnosis. Use of nursing and nutrition personnel is essential to alleviate the physician time demands of the very young diabetic. A maximum effort to achieve optimum control requires a heavy investment in physician time, but this investment will be repaid many times over if a decrease in complications and their associated demands on physician time is accomplished.

THE PROBLEM OF THE "BRITTLE" DIABETIC

The poorly controlled diabetic who has frequent swings from hypoglycemia to hyperglycemia and acetonuria is often labelled as "brittle." These children are almost invariably receiving too much insulin either in terms of total dose or in distribution of insulin activity.[5] Insulin doses approaching 1 unit per kg of body weight given as a single AM injection will usually exert an excessive peak insulin effect resulting in afternoon hypoglycemia and subsequent rebound hyperglycemia during the evening and night. Overt insulin reactions occur initially in the afternoon but may decrease in frequency or disappear completely as insulin dose is raised in an attempt to improve control. The decrease in clinical manifestations of hypoglycemia as insulin dose becomes more and more excessive may be related to "down regulation" of insulin receptor sites or to increasing levels of hormonal antagonists to insulin. When blood sugar levels and glycosuria deteriorate or do not improve with increasing insulin doses, a trial on split dose with ⅔ of the dose given

before breakfast and ⅓ before the evening meal should be undertaken. If no improvement is obvious from this maneuver, a diabetologist should be consulted. Poor control whether from inadequate, excessive or maldistributed insulin activity is associated with accelerated microvascular complications. Every effort should be made to reestablish adequate control and the label "brittle diabetic" should not be used as a cover-up for lack of effort or expertise on the part of health professionals.

THE CHALLENGE

The management of an insulin dependent diabetic is a responsibility which should not be undertaken lightly by the physician. A commitment of time, interest and enthusiasm and a willingness to work with other health professionals is essential. In very few medical conditions are the benefits of successful management and the frustrations of failure so apparent to both the physician and the patient.

References 1. U.S. Department of Health, Education and Welfare. Diabetes Data-Complied 1977. U.S. Government Printing Office, Washington, 1978. 2. Pirart J: Diabetes Mellitus and Its Degenerative Complications: A Prospective Study of 4,400 Patients Observed Between 1947 and 1973. *Diabetes Care* 1:168-188, 252-263, 1978. 3. MacMillan DR: The Fallacy of Insulin Adjustment by the Sliding Scale. *J Ky Med Assoc* 68:577-579, 1970. 4. Skyler JS, Lasky IA, Skyler DL, Robertson EG, Mintz DH: Home Blood Glucose Monitoring as an Aid in Diabetes Management. *Diabetes Care* 1:150-157, 1978. 5. Somogyi M: Exacerbation of Diabetes by Excess Insulin Action. *Amer J Med* 26:169-191, 1959.

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Indications: Management of anxiety disorders, or short-term relief of symptoms of anxiety. Anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic. Symptomatic relief of acute agitation, tremor, impending or acute delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: relief of skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome. *Oral forms* may be used adjunctively in convulsive disorders, but not as sole therapy. *Injectable form* may also be used adjunctively in: status epilepticus; severe recurrent seizures; tetanus; anxiety, tension or acute stress reactions prior to endoscopic/surgical procedures; cardioversion.

The effectiveness of diazepam in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindications: Tablets or capsules in children under 6 months of age; known hypersensitivity; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: As with most CNS-acting drugs, caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of predisposition to habituation/dependence.

> *Usage in Pregnancy:* **Use of minor tranquilizers during first trimester should almost always be avoided because their use is rarely a matter of urgency and because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

ORAL Advise patients against simultaneous ingestion of alcohol and other CNS depressants.

Not of value in treatment of psychotic patients; should not be employed in lieu of appropriate treatment. When using oral forms adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may be associated with temporary increase in frequency and/or severity of seizures.

INJECTABLE *To reduce the possibility of venous thrombosis, phlebitis, local irritation, swelling and, rarely, vascular impairment when used IV: inject slowly, taking at least one minute for each 5 mg (1 ml) given; do not use small veins, i.e., dorsum of hand or wrist; use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Injectable Valium directly IV, it may be injected slowly through the infusion tubing as close as possible to the vein insertion.*

Administer with extreme care to elderly, very ill, those with limited pulmonary reserve because of possibility of apnea and/or cardiac arrest; concomitant use of barbiturates, alcohol or other CNS depressants increases depression with increased risk of apnea; have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosage at least 1/3, administer in small increments. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs.

Has precipitated tonic status epilepticus in patients treated for petit mal status or petit mal variant status. Not recommended for OB use.

Efficacy/safety not established in neonates (age 30 days or less); prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence; can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of diazepam, *i.e.*, phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function; avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed and tolerated).

The clearance of diazepam and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.

INJECTABLE Although promptly controlled, seizures may return; readminister if necessary; not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures; use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, observed in patients during and after diazepam therapy are of no known significance.

INJECTABLE Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia.

In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm/pain in throat or chest have been reported.

Dosage: Individualize for maximum beneficial effect.

ORAL: *Adults:* Anxiety disorders, relief of symptoms of anxiety—Valium (diazepam/Roche) tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 Valrelease capsules (15 to 30 mg) daily. Acute alcohol withdrawal—tablets, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; or 2 capsules (30 mg) the first 24 hours, then 1 capsule (15 mg) daily as needed. Adjunctively in skeletal muscle spasm—tablets, 2 to 10 mg t.i.d. or q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily. Adjunctively in convulsive disorders—tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily.

Geriatric or debilitated patients: Tablets—2 to 2½ mg 1 or 2 times daily initially, increasing as needed and tolerated (see Precautions). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose.

Children: Tablets—1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use in children under 6 months). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose (not for use in children under 6 months).

INJECTABLE Usual initial dose in older children and adults is 2 to 20 mg I.M. or I.V., depending on indication and severity. Larger doses may be required in some conditions (tetanus). In acute conditions injection may be repeated within 1 hour, although interval of 3 to 4 hours is usually satisfactory. Lower doses (usually 2 to 5 mg) with slow dosage increase for elderly or debilitated patients and when sedative drugs are added. (See Warnings and Adverse Reactions.)

For dosages in infants and children see below; have resuscitative facilities available.

I.M. use: by deep injection into the muscle.

I.V. use: inject slowly, take at least one minute for each 5 mg (1 ml) given. Do not use small veins, i.e., dorsum of hand or wrist. Use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute Valium with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.

Moderate anxiety disorders and symptoms of anxiety, 2 to 5 mg I.M. or I.V., and severe anxiety disorders and symptoms of anxiety, 5 to 10 mg I.M. or I.V., repeat in 3 to 4 hours if necessary; acute alcohol withdrawal, 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary. Muscle spasm, in adults, 5 to 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary (tetanus may require larger doses); in children *administer I.V. slowly*; for tetanus in infants over 30 days of age, 1 to 2 mg I.M. or I.V., repeat every 3 to 4 hours if necessary; in children 5 years or older, 5 to 10 mg repeated every 3 to 4 hours as needed. Respiratory assistance should be available.

Status epilepticus, severe recurrent convulsive seizures (I.V. route preferred), 5 to 10 mg adult dose administered slowly, repeat at 10- to 15-minute intervals up to 30 mg maximum. Repeat in 2 to 4 hours if necessary, keeping in mind possibility of residual active metabolites. Use caution in presence of chronic lung disease or unstable cardiovascular status. Infants (over 30 days) and children (under 5 years), 0.2 to 0.5 mg slowly every 2 to 5 min., up to 5 mg (I.V. preferred). Children 5 years plus, 1 mg every 2 to 5 min., up to 10 mg (slow I.V. preferred), repeat in 2 to 4 hours if needed. EEG monitoring may be helpful.

In endoscopic procedures, titrate I.V. dosage to desired sedative response, generally 10 mg or less but up to 20 mg (if narcotics are omitted) immediately prior to procedure; if I.V. cannot be used, 5 to 10 mg I.M. approximately 30 minutes prior to procedure. As preoperative medication, 10 mg I.M.; in cardioversion, 5 to 15 mg I.V. within 5 to 10 minutes prior to procedure. Once acute symptomatology has been properly controlled with injectable form, patient may be placed on oral form if further treatment is required.

Management of Overdosage: Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure; employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension. Dialysis is of limited value.

How Supplied:

ORAL Valium scored tablets—2 mg, white; 5 mg, yellow; 10 mg, blue—bottles of 100 and 500; Prescription Paks of 50, available in trays of 10; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25 and in boxes containing 10 strips of 10.

Valrelease (diazepam/Roche) slow-release capsules—15 mg (yellow and blue), bottles of 100; Prescription Paks of 30.

INJECTABLE Ampuls, 2 ml, boxes of 10. Vials, 10 ml, boxes of 1; Tel-E-Ject® (disposable syringes), 2 ml, boxes of 10. Each ml contains 5 mg diazepam, compounded with 40% propylene glycol, 10% ethyl alcohol, 5% sodium benzoate and benzoic acid as buffers, and 1.5% benzyl alcohol as preservative.

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LETTERS

The Letters To The Editor column is a means for the KMA physicians to express their opinions and viewpoints on varied topics. If you have an item you would like brought before your fellow practitioners, please submit it to Letters To The Editor, Kentucky Medical Association, 3532 Ephraim McDowell Dr., Louisville, Kentucky 40205. Communications should not exceed 250 words. The right to abstract or edit is reserved by the editors of the Journal. Names will be withheld upon request, but anonymous letters will not be accepted.

To The Editor:

On June 14, 1952, a single, white female, BD 10/26/26, was treated by me for Pityriasis Rosea. She recovered uneventfully in two weeks and was next seen 5/9/75 for swollen hands. There was swelling in both hands and left leg, and a diagnosis of presumptive Scleroderma was made at that time. She was seen again on 6/17/75 and the CBC, urinalysis and ESR were normal. She was treated with Reserpine, 0.1 mg. P.C. for Raynaud Syndrome reaction that was present in her hands. At this time it was most obvious that she suffered from Scleroderma.

On 7/11/75 she was directed to the health spa for whirlpool and similar water therapy treatments and fitted for elastic sleeves, hopefully for reduction of fluid in her arms. She was seen at regular intervals and treated with symptomatic care yearly until it was concluded that the only beneficial therapy was the Florida sunshine. This would give partial, mild relief from five to six weeks. She was found to be ANF neg. and Immune Globulin normal for Ig G 1.2 gm %, but Ig A 0.48 and Ig M 0.13 were mildly elevated.

In 1979 there was noted poor peristaltic activity throughout the extent of the esophagus with dilitation of the distal two-thirds and some residual food particles in the distal esophagus. There was a small sliding Hiatal Hernia with evidence of gastro-esophageal reflux.

On 5/14/82 the patient was started on Nifedipine of escalating doses beginning with 10 mg. t.i.d. one week and increasing by 10 mg t.i.d. each week to tolerance. She could only tolerate 20 mg. t.i.d. and was maintained on that dosage.

At the end of the first month of 6/23/82 she had become aware for the first time in many years that there was perspiration in the axillary areas and underneath her chin. There was also tingling in her fingers.

One month later on 7/20/82 she reported much more perspiration, with all her skin softening and very noticeably increased tingling of her fingers. On 8/20/82 the skin and integument were becoming soft and pliable. On 9/21/82 her hands, which previously had been fixed in a claw-like position, were now moving with flexion of fingers, plus widening and closing of the space between the fingers. Her face, which previously had been mask-like with upper and lower retraction revealing upper and lower teeth, was now softened considerably and smiling was again possible. The skin of the posterior arm area was sagging and wrinkling with the forearm skin softened and wrinkled to the degree that it could be picked up and it would remain in a tenting position for short periods as opposed to the previous hard plastic feel of her arms. Her swallowing, which had become almost impossible, was now greatly improved.

All medications other than routine vitamins were discontinued and only the anti-anginal drug of the new class, the calcium channel blockers, Nifedipine (Procardia) was in use.

Had she been treated at an earlier time with Nifedipine, it would not have been necessary for her to be placed on disability by her employer in the Spring of 1982.

Patient was seen in the office on October 12, 1982 for re-evaluation and her esophagus has softened and permitted swallowing to such an improved extent that she had gained 5-1/2 pounds in the past month. Her entire appearance and physical examination is rapidly returning to a normal state. She is scheduled for re-evaluation in one month.

Edgar Byron Morgan, Sr., M.D.
2708 Frankfort Avenue
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MATERNAL MORTALITY

CHARLES R. OBERST, M.D., LOUISVILLE

Case Report

A 35-year-old, black, gravida 2, para 1, AB 0, was initially seen at 36 weeks gestation. After a normal prenatal course, she was admitted at term on January 7, 1978, to a 385-bed teaching hospital.

Examination confirmed by x-ray revealed a complete breech presentation. Since the infant was thought to weigh close to nine pounds, a Cesarean section was thought to be the safest method of delivery.

During the preparation for Cesarean section, the patient's membranes ruptured spontaneously and the umbilical cord prolapsed. She was put in the knee-chest position and taken immediately to the operating room, where she was prepped and draped. Endotrachael intubation was accomplished, but with difficulty. The anesthesiologist then used a bag and mask for ventilation, in addition to succinylcholine for relaxation. It was believed that intubation was successful. Both lungs were auscultated and considered to have adequate breath sounds.

A sub-umbilical incision was made down to the fascia, and the blood appeared adequately oxygenated. The peritoneum was entered, a low-cervical section performed, and an 8-pound, 13-ounce male delivered. The infant had Apgar scores of 1 and 7.

The patient was given two grams of Ampicillin for prophylaxis, secondary to the prolapsed cord. Cord blood was drawn, the placenta manually removed, Pitocin added, and the rate of intravenous infusion increased.

The uterine incision was closed with two layers 00 chromic gut suture. Hemostasis was good. The peritoneal closure had begun when the anesthesiologist noted a drop in the patient's blood pressure (BP/40) and began having difficulty ventilating her. It was then noted that the stomach and small bowel were extremely dilated, and a nasogastric tube was inserted for decompression. The cardiac monitor noted an arrest. Immediate closed cardiac massage was begun.

One of the surgeons continued to close the incision, while another aided in resuscitation efforts. Intracardiac epinephrine and sodium bicarbonate were given in addition to atropine, calcium chloride, solucortef and glucagon. The patient was maintained on a Dopamine drip. She went into ventricular fibrillation but was successfully defibrillated. After resuscitation, her blood gases showed a pH of 7.5, PO_2 of 80, PCO_2 of 37, and bicarbonate of 33.2. However, adequate BP could not be maintained. The patient's pupils were fixed and dilated. She again went into ventricular fibrillation and expired at 12:15 p.m. The cause of death was listed as cardiopulmonary arrest.

Discussion

Obstetric and anesthetic emergencies often occur without warning. An anesthetic emergency significantly influences the otherwise normal obstetrical course. Successful management of these complications depends upon anticipation of their possible occurrence, prompt recognition, and immediate treatment. Death secondary to anesthesia may occur in any anesthetized patient; all procedures requiring anesthesia carry related risks to the patient.

Although this death is listed as cardiopulmonary arrest, the etiology is not clear because an autopsy was not done. Prolonged inadequate ventilation secondary to an inadequate airway may have been contributed to by pulmonary compression secondary to a markedly distended gut.

A review of this case reveals that "the lungs were ausculated" after intubation and were considered to have adequate breath sounds. Following a difficult intubation the drapes should always be removed and the chest wall of the patient checked to see if it is moving with respiration.

Although the blood appeared adequately oxygenated with the initial incision, an Apgar score of 1 indicates fetal distress of marked severity. This could either have been due to compression of the prolapsed cord or inadequate maternal ventilation.

Another possible cause of death is occult aspiration of gastric contents. Anesthesia may be responsible for 5-15% of all maternal deaths; at least half of these are due to aspiration of gastric contents.[1] In this particular case, no vomitus was noted in the face mask or pharynx. This will be discussed further, however, because it is a common cause of maternal anesthetic death. With the Cesarean section rate increasing at 1% per year,[2] and with approximately 50% of these operations being performed under general anesthesia, aspiration of gastric contents is a continuing problem.

Mendleson's syndrome[3] is the aspiration of gastric contents. It is aspiration pneumonitis, classically de-

scribed as an asthma-like reaction consisting of cyanosis, tachycardia, dyspnea, and expiratory wheezing, which is pathognomonic of aspiration of gastric contents, in contrast to the respiratory obstruction produced by the aspiration of solid food material.

Aspiration of gastric contents is nearly always preventable. Since the obstetric patient has delayed gastric emptying, she should always be considered to have a full stomach. When general anesthesia is indicated, endotracheal intubation should be accomplished while all measures are used to avoid aspiration of gastric contents.

Technical difficulties in tracheal intubation probably lead to many cases of aspiration. This can be avoided by careful preoperative assessment, the availability of proper equipment, and experienced personnel. Intubation of the trachea while the patient is awake should be considered.

A woman in labor has a gastric fluid pH of 2.5 or less. To achieve a gastric fluid pH of less than 3.5, it has been recommended that the patient receive antacids every two to three hours. It has been reported recently that aspiration of gastric contents with or without antacids produce the same changes—a decrease in arterial oxygen, partial pressure, and an increase in pulmonary shunting. Immediate x-ray changes are the same. However, the lungs of animals treated with antacids still demonstrated extensive changes one month later, whereas those who aspirated gastric acids were nearly normal. Antacids are given at 15-30 cc every two hours, with the last dose given just before the induction of general anesthesia. Crawford[5] maintains that this is adequate prophylaxis against Mendleson's syndrome.

In any event, one must question the logic of repeatedly administering 30 ccs of fluid to a patient whose gastric emptying is delayed. Routine antacid therapy may indeed result in the accumulation of a large gastric residue, which poses as great an aspiration hazard as normal gastric contents. In England, the number of deaths from aspiration did not change after antacids were widely used as a prophylaxis against Mendleson's syndrome.[6]

Although narcotics delay gastric emptying, a patient in labor must be given adequate sedation and analgesia. This makes thorough preparation for a safe anesthetic even more necessary.

If there is no obstetric emergency the stomach should be emptied before the start of general anesthesia. In the past, a nasogastric tube or apomorphine-induced forced emesis have been used. Neither of these procedures is very pleasant and probably not very efficient. Producing emesis with apomorphine is not without its difficulties, for it, too, is a medullary depressant and may impair ventilation and circulatory regulating mechanisms.

A new drug, metroclopromide, increases gastric emptying by both promoting peristalsis and relaxing the pyloric sphincter. It is also a potent anti-emetic and increases the tone in the lower esophagus, which discourages gastro-esophageal reflux.[7]

The patient receiving a general anesthetic should be positioned on the operative table in the supine position with a wedge (or two folded sheets) beneath the right hip. If left uterine displacement or uterine tilt is not performed, progressive fetal acidosis may develop as a result of impaired uteroplacental perfusion, secondary to aorta-canal compression by the uterus. The left lateral tilt of the uterus may result in improved neonatal outcome. Skin preparation and surgical draping should be performed on all patients before induction of anesthesia.

Three minutes of preoxygenation with 100% oxygen should be done before induction with general anesthesia. By increasing arterial-inspired oxygen concentration from 28 to 66% during general anesthesia, maternal oxygen tension is more than doubled. A corresponding increase in the umbilical vein and artery PO_2 was also noted.

Three milligrams of Curare given two minutes before induction has been helpful in decreasing the rise of the intra-gastric pressures which are related to the fasiculations associated with the use of depolarizing relaxants. Precautionary measures such as preoxygenation of the patient before intubation are important. "Sellicks maneuver"—backward pressure on the cricoid—is said to prevent passive regurgitation and resultant aspiration into the airway, but this maneuver does not prevent active vomiting. The amount of pressure on the cricoid should be sufficient to cause pain if applied to the bridge of one's nose. The pressure on the cricoid must be applied firmly from before induction until after the cuff of the endotracheal tube has been inflated.

Ideally, all deliveries should be done under regional anesthesia. On rare occasions such as when a patient has a bleeding or physical abnormality or because of technical impossibility, a general anesthetic must be given.

Aspiration is the major cause of maternal anesthetic mortality. A pregnant woman should have every opportunity to have a regional block.

Neonates delivered during epidural anesthesia while the mother breathed an oxygen-enriched atmosphere had more favorable acid-base state and higher oxygen tensions than the group delivered under general anesthesia. This is reflected by higher Apgar scores and a shorter time to sustain respirations. The major disadvantages of epidural anesthesia for emergency Cesarean sections are the slow onset of analgesia and occasional hypotension if the patient has not been preloaded with fluids. Despite using left lateral tilt position and prophylactic fluid hydration, 45% need intravenous Ephedrine IV to correct hypotension after initiation of the epidural anesthesia.[8]

Spinal anesthesia also can be used quickly and effectively for almost any obstetrical problem except hypovolemic shock. Close observation of the patient and continuous monitoring of blood pressure are essential for proper management of mother and baby.

Summary

1. Regional anesthesia is the anesthetic of choice for mothers-to-be. If not possible, then all precautions should be used with a general anesthesia.
2. Vomiting and aspiration have always been a leading cause of maternal anesthetic mortality.
3. "Sellicks maneuver" is not a fool-proof technique for preventing aspiration of gastric contents.
4. Antacid prophylaxis in labor has not been proven to be effective in prevention of Mendleson's syndrome.
5. There is no safe time interval between the last meal and the time of delivery. Labor patients should always be considered to have a full stomach.
6. Maternal inhalation of oxygen during Cesarean section under general anesthesia allows the infant at birth to be in optimal acid-base state.
7. All Cesarean section patients with general or regional anesthesia should have vital signs continuously monitored if early warning of cardiovascular dysfunction is to be recognized.
8. The search for a safe general anesthetic technique in obstetrics continues.

Acknowledgement

The author wishes to thank Eugene H. Conner, M.D., former chairman of the Department of Anesthesiology at the University of Louisville School of Medicine (1957-1970), and the Methodist Evangelical Hospital Department of Anesthesiology for their help and for their critique of this case.

References 1. Bonica JJ: Principles and Practice of Obstetric Analgesia and Anesthesia. Philadelphia, F. A. Davis. 1967, p 751. 2. Slee VN: PAS Reporter (Special Issue) 14:7-11, 1976. 3. Mendleson CL: The aspiration of stomach contents into lungs during obstetrical anesthesia. *Am J Obstet Gynec* 52:191, 1946. 4. Mebrotra D. Paust JC: Antacids and cricoid pressure on prevention of fatal aspiration syndrome. *Lancet* 2:582. 1979. 5. Crawford JS: Antacids and cricoid pressure in prevention of fatal aspiration syndrome. *Lancet* (Aug 18):535, 1979. 6. Seath DB: Editorial. Mendleson's Syndrome. *Br J Anesth* 50:81, 1978. 7. Brock-Utone JG, et al: The affects of Metroclopromide on the lower esophageal sphincter in later pregnancy. *Wuerth Interes Care* 6:26, 1978. 8. Fox GS, et al: Anesthesia for Cesarean section: Further studies. *Am J Obstet Gynec* 133:15, 1979.

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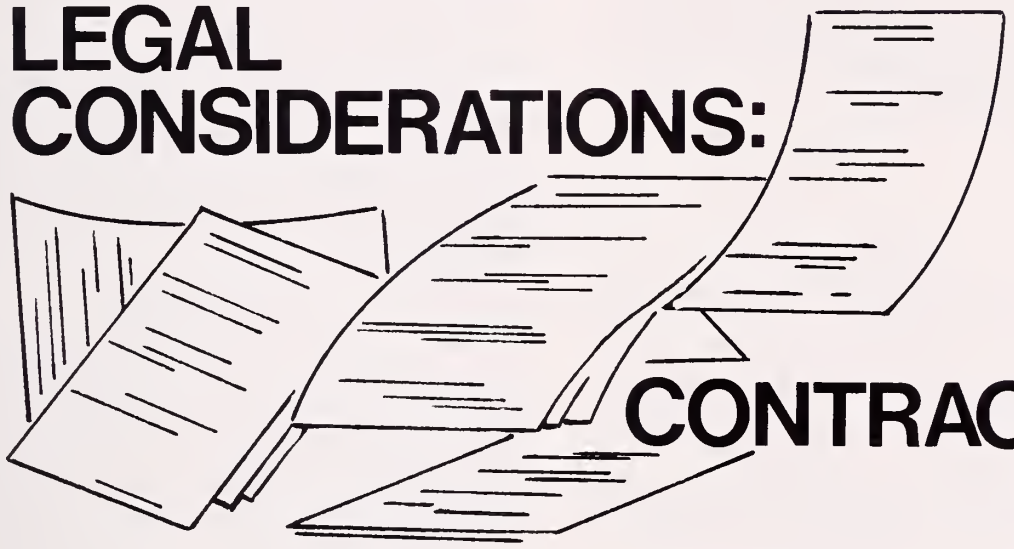
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PRACTICE MANAGEMENT

LEGAL CONSIDERATIONS: CONTRACTS



Legal Considerations

Contracts

As with all major aspects of a medical practice, there are certain segments that require legal considerations. The purchase of equipment to support a physician's practice usually involves the use of very basic contracts. However, the investment in a computer system should require an extensive contract that spells out the obligations of the vendor and lists the expectations of the physician. This document, plus the "Proposal for Bid" will become the main documents for insuring the physician a satisfactory installation and operation of a computer system.

The "Proposal for Bid" should become the outline for any contract that is to be prepared between the vendor and the physician. The vendor will usually have a prepared contract that will be vague and more in line with protecting their interest instead of the physician's. This is not to say that they are doing anything unethical, but as any individual, are protecting their own interests. It is imperative that the physician consider the same thing. It is not necessary to have the vendor rewrite their contract but those items not explicitly written into their agreement should be included on a rider to their contract. This rider can be drafted by the vendor with the physician's input or the physician can have his legal counsel prepare the rider for inclusion with the contract. The latter is a more desirable arrangement. Make sure that the rider is signed along with the contract. A document such as a contract between the two parties is the single most important item in insuring a successful conversion to automation. Services or items promised during conversations are not binding, and unless written down and agreed upon by both parties, will normally not materialize. Much anguish and anxiety can be spared by insuring that the contract contains many of the following items regarding the purchase of a computer system.

1. Equipment list and system specifications (what can it do, how much storage)
2. Terms of the agreement (whether a deposit will be required before ordering)
3. Ownership (outline purchase/lease plan)

4. If a lease plan, does it provide an option to purchase after a certain time period and will the money paid into the lease be applicable to the purchase price
5. Specific services and supplies to be provided at installation
6. Anticipated cost increases and expected subsequent increases for future additional purchases
7. Delivery provisions (to your front door or carried into and placed in a location in your office)
8. Installation (cost and expected time to complete)
9. Reliability and acceptance
10. Rights and options
11. Performance
12. Remedies
13. Damages caused by an "act of God" or during delivery
14. Warranty provisions on both hardware and software
15. Taxes
16. Training classes, support manuals and hardware documentation
17. Insurance on shippage of equipment
18. Modifications and future upgrades of hardware (can you anticipate this, or is what you purchased what you get)
19. Physical and environmental requirements of both physician and vendor
20. Availability of software enhancements, documentation and source code access
21. Procedures and equipment necessary to conduct backup, telecommunications and other optional items
22. Cancellation provisions.

Even if a physician decides that the document prepared by the vendor is acceptable for the purchase of the equipment, it is advisable to have his legal counsel review the document for any hidden items that could lead to misunderstandings and result in future problems. Any vendor who does not wish to comply with the physician's wishes to spell out the provisions of the agreement is one to be avoided. A company that is willing to commit to these provisions is a company that has taken a stand to provide exemplary service to its customers.

Any promise made by the vendor should be in writing. It is important that the physician correspond with the vendor in writing in order to have a record of all actions taken on the purchase and maintenance of his system should it become necessary to proceed with action against the vendor. If the physician reaches this point and is doing a lot of phone negotiations, then a phone log containing the date, time, and a brief description of conversations should be maintained.

There will also be other contracts for hardware and software support that the physician will later run into that are not as detailed as the purchase or lease arrangement for a computer system. However, the physician should make sure that the support being provided is in keeping with his needs.

A final rule to follow is "have it in writing." This insures services and reduces problems before they can develop. I am sure that the physician will find most vendors appreciative of his interest because this agreement also protects them by listing their exact responsibilities.

Confidentiality

The installation of a computer system and the input of the physician's records will result in the creation of a computer data base. This data base will consist of either a partial or complete record file of the physician's patients. Extreme care and effort to protect these records, as has been done previously by the physician and his staff, is now as important as ever. Man, by nature, is suspicious of any item or entity that he can not directly understand or control, thus he is initially leery of the power the computer has in storing vast quantities of information. Maintaining the confidentiality of this information is vital to the physician in insuring patient trust, thus securing the patient's full cooperation in obtaining the information necessary for proper diagnosis and treatment. The information must be protected but still be available should the patient request release of his records to be inspected for legitimate purposes by another physician or agency.

Computers provide the physician with an opportunity to assemble and store vast quantities of information that is readily accessible. This accessibility bears careful examination to insure the confidentiality of the data base. The AMA House of Delegates requested a set of guidelines to assist physicians in insuring the appropriate protection of confidentiality of medical information in light of the availability of computerized medical records. Their request was made at the 1977 Annual Convention Department of Computer Systems in Medicine whose recommendations were reviewed by the AMA House of Delegates at their meeting in December of 1977 as the special report "Confidentiality

of Computerized Patient Information." The following is a brief summary of their findings and subsequent recommendations.

1. Verify the authenticity of the source of information entered into the computer data base. Who is providing the information? Is it the individual in question, a relative or friend?
2. The physician should inform your patient population in advance of any services being rendered of your computerized storage in a statement of purpose and the individuals or agencies (electronic insurance claims processing) that may have access to this information. The specific information that will be released should be made apparent to the patient. Usually a physician can include a statement on their record storage procedures in a brochure on the services provided by his practice. This brochure should include the physician's list of services, location of practice, hours of service and hospitals served besides a statement of record storage and billing procedures.
3. Should statistical data be released on the physician's patient population, then the patient should be notified of the extent of data released. A physician also should see that all measures are taken to insure patient anonymity.
4. Release of any data should be as previously handled by the physician's office. Written prior consent for release of information to individuals or agencies with bona fide reasons for its use should be obtained. Only pertinent data should be released. The computer makes it very easy to access an entire file when only very basic information such as an immediate diagnosis and treatment are necessary for completion of the claim. Therefore, it will be necessary to produce reports that provide only the necessary information, thus the physician should make sure his software is flexible enough to do this.
5. Formal structure of administering data base including staff responsibilities, time period when changes will be made and the final verification of data when it's entered into the system.
6. The purging or deleting of information from the data base also should be included in the previously mentioned structure. It is imperative to maintain a tight control on this segment of your practice. Although it seems very easy to destroy information, if the appropriate precautions are taken, the chances of somebody successfully destroying any records is very remote. Computer systems can be set to disallow any deletion accept by authorized personnel. These personnel should maintain a log including dates, times and items changed, deleted or moved to off line storage. The similar measures that you take to insure your financial accountability in auditing should also be used on patient record management. We are not advocating that the physician personally input and delete records but that he have an active role in its management.
7. Accessibility to the data base should be limited to insure only authorized personnel access. Telecommunications or networking should be turned off when not actually needed to insure the integrity of the system.

Security

To maintain the confidentiality of the system's records requires tight security. The security does not need to be extensive but one that indicates to those personnel responsible for its safekeeping that you are serious about maintaining the confidentiality of doctor-patient relationship.

1. The data base should be backed up daily and these copies be locked up in a secure place with only authorized personnel having access. These copies should be kept in close proximity to the computer should they be needed, but thought should also be given to maintaining a weekly backup copy off site in case of unexpected natural phenomenon or personnel tampering.
2. Employees assigned to automation should be informed of the physician's protocol for maintaining confidentiality and security of the system.
3. The computer should be kept in an area that can be secure (locked up) from personnel during non-business hours or all records should be physically removed from the system and locked away.
4. Remember to change all employee access codes at the termination or even voluntary leaving of any employee and not just the code of the employee leaving.
5. Periodically all access codes should be changed but not at any specific scheduled time.
6. Archived records should be maintained in a safe (locked) place usually off site but accessible should they be needed for review by the physician's counsel.

7. Maintain audit trails to not only maintain confidentiality but also to insure the financial integrity of your office.
8. Occasionally do a manual count of a day's transactions and compare that with the computer.
9. Do not allow one person to enter all the data.
10. Require all personnel who enter financial data to take one week's uninterrupted vacation every year. During this time all access to the computer is cut off to them. Any discrepancies should surface during this time period.
11. Maintain the appropriate checks and balances especially when ordering supplies, software and additional equipment.

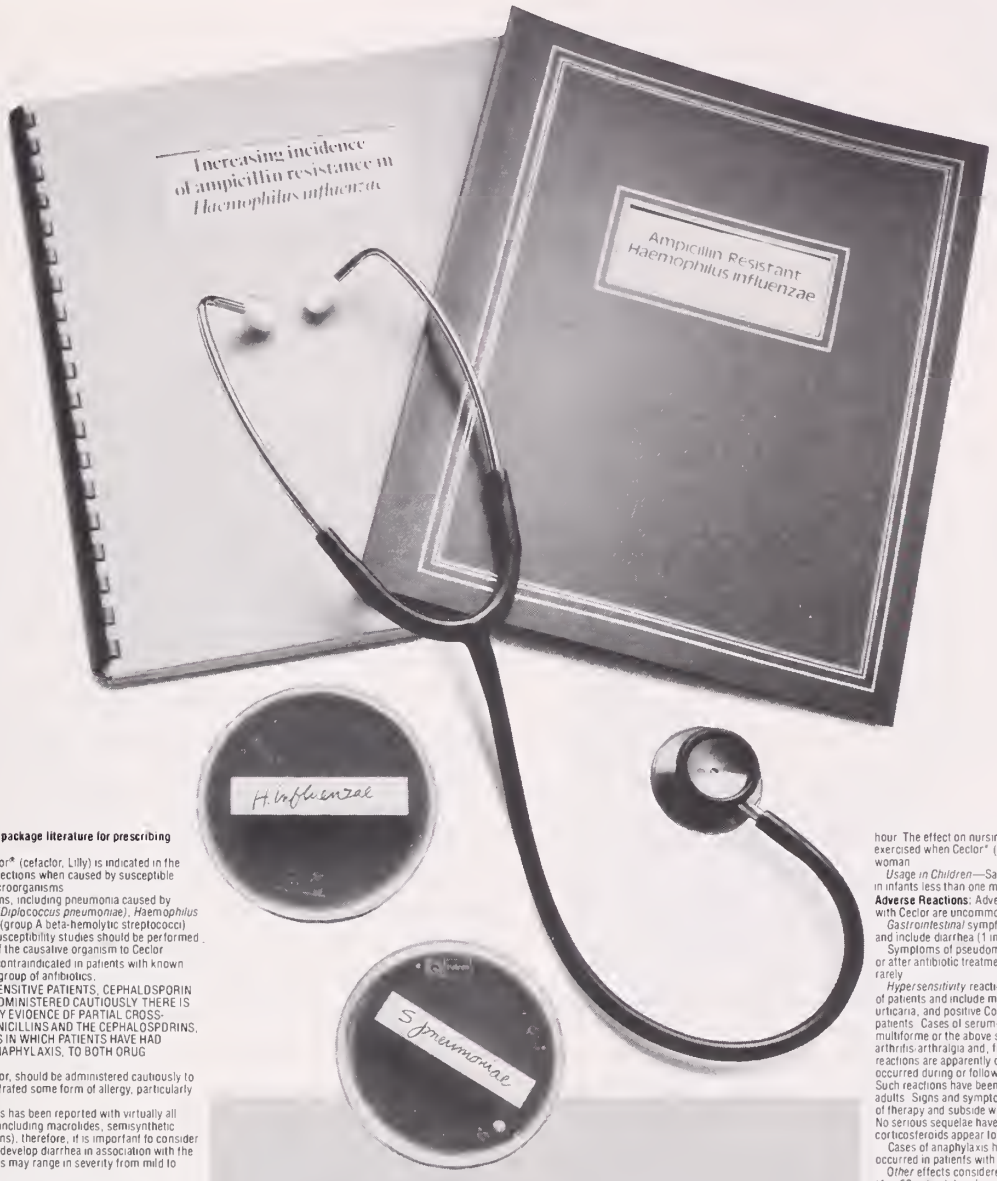
Other security tips include:

1. Be careful of employees who work long hours and take no vacation and do not delegate any part of the accounting function to others.
2. The physician should show active interest in the computer and financial operations.
3. Occasionally open all mail that comes into the office.
4. Do an index card audit—maintain a record of all patients seen on an index card with the diagnosis, charges listed and compare that list with a computer printout.
5. Know how to print out the balance of a day's transactions and to complete a trial balance on a weekly or monthly basis.
6. See if the computer software can provide a log of computer input and output and accounts that access the system during specific times. Also see if the access code system can be put on a clock to restrict accessibility of records to only key personnel.
7. Change passwords regularly and develop a level of access based on personnel needs.
8. Bank statements should be sent to your home.

Although some of these steps seem excessive and impractical for a small practitioner's office, there are many documented cases that reflect physicians having problems because some of these basic guidelines were not adhered to. It is only human nature to want to explicitly trust fellow employees, however it is also the physician's responsibility to remove temptation from employees by not allowing unauthorized access to records and accounting procedures. These guidelines can be implemented in a professional and business like manner that emphasizes a strict working code that stresses the confidentality while maintaining the security and the accountability of the physician's computer system.

This is the eighth in a series of articles by Joe Witherington, Jr., System Manager for KMA and KMIC.

An added complication... in the treatment of bacterial bronchitis*



Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor
Pulvules®, 250 and 500 mg

Brief Summary. Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions*—If an allergic reaction to Ceclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis

Usage in Pregnancy—Pregnancy Category B—Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers—Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor® (cefaclor, Lilly) is administered to a nursing woman.

Usage in Children—Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations of SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.*

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

References

1. Antimicrob. Agents Chemother., *8*: 91, 1975
2. Antimicrob. Agents Chemother., *11*: 470, 1977
3. Antimicrob. Agents Chemother., *13*: 584, 1978
4. Antimicrob. Agents Chemother., *12*: 490, 1977
5. Current Chemotherapy (edited by W. Siegenthaler and R. Luthy), II: 880. Washington, D.C.: American Society for Microbiology, 1978
6. Antimicrob. Agents Chemother., *13*: 861, 1978
7. Data on file, Eli Lilly and Company
8. Principles and Practice of Infectious Diseases (edited by G. L. Mandell, R. G. Douglas, Jr., and J. E. Bennett), p. 487. New York: John Wiley & Sons, 1979

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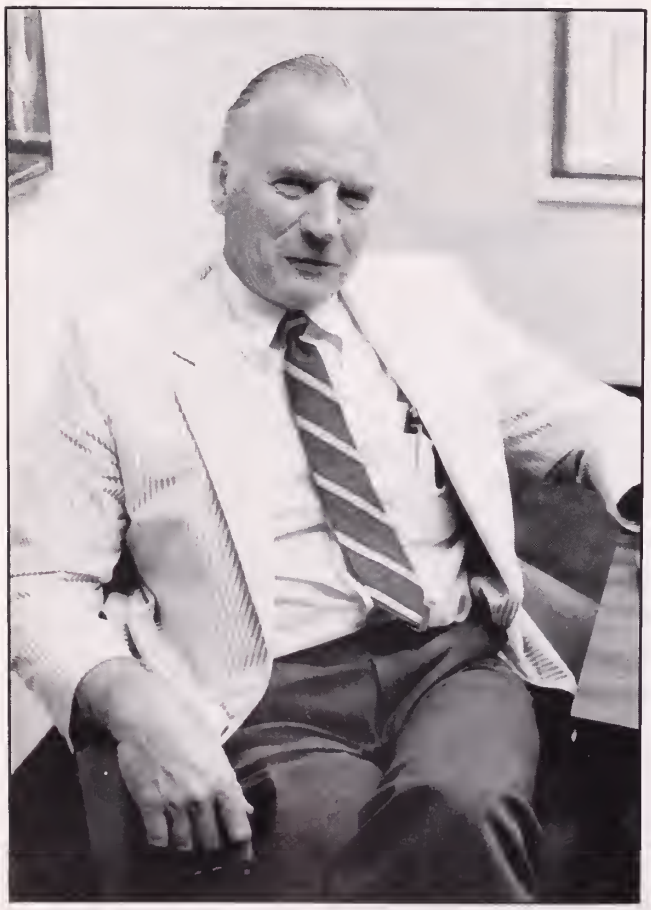
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PROFILE

James B. Holloway, Jr., M.D.

IN October, the new President of KMA takes office and with this job goes the task of facing issues that seem to haunt the medical profession. These issues may take different forms each year, but the overall source of the problems persist—rising medical costs, health care for the poor; physician competition and a meddling bureaucracy.

James B. Holloway, Jr., M.D., is the 1983-84 KMA President. He is familiar with all of these issues having served as President of the Fayette County Medical Society, the Kentucky Surgical Society and the Southern Society of Clinical Surgeons. He has also served KMA as Vice President and Chairman of the Board of Trustees.



Doctor Holloway is realistic and candid about the biggest issue he will be dealing with this year. "I think it is going to be a difficult year because of the legislature and because of complex and seemingly insoluable financial problems facing the new state administration whomever heads it. The problem is that they're not going to accept the blame themselves. They're not going to be able to finance programs that have been promised. The questions that will come up are: 'How do we get them to be honest about the money that is available?' and 'How are we going to be assured that physicians have a voice in where it is distributed.' " Doctor Holloway goes on to say, "The medical profession has always done its share from the beginning in insuring quality medical care for the indigent. Why should we be taken to task for a bureaucracy that drains off a high percentage of the money available to non-priority areas.

From escalating medical costs and physician competition, a new medical marketing device has evolved—Preferred Provider Organization (PPO). A PPO is a group of physicians and/or hospital(s) that agree to provide medical services to a target population at a fixed or preferred rate of charge. Doctor Holloway is a member of a PPO, the Physicians Alliance in Lexington. He is direct in describing his position. "Apparently the time has come for these organizations to assure quality patient care while attacking availability problems. There is no question that the one I am in was started as a result of competition, and that a PPO

is going to be almost essential for survival in some areas."

The role of KMA in assuring competence in PPO's and other new organizations will be a difficult one Doctor Holloway believes. "The KMA represents all facets of medical practice, so whether our role is one of working with related groups or providing direct influence through CME programs for example, we must not let that representation diminish."

This is not to say that Doctor Holloway feels KMA should take a backseat on policy making. Quite the contrary is true. "The first priority of physicians and the KMA is care of our patients. This means fighting a creeping bureaucracy. There is simply no one better qualified than physicians to direct the planning of health care."

One change that will occur during Doctor Holloway's year as President will be a dues increase of $75 for KMA members. He explains the reasons. "We are the only state medical association in the nation who hasn't had a dues increase in the last eight years. If you average the inflation rate over those eight years at 10% a year, and many years it was much higher, our expenses should have increased 80%. A dues increase is justified on these grounds alone. We were able to maintain the cost of dues three years beyond our projected dues increase because of the reserves which generate non-dues income for KMA. It is important now to maintain these reserves in the future."

Doctor Holloway has been practicing surgery in Lexington since 1952. He met his wife when she was the head plastic surgery nurse at Duke University where he interned.

The Holloways home is in Lexington, and it has a very special meaning for them. The house was built in 1797 and is listed on the national registry of historical homes. It sits on 122 acres which allows the Holloways to pursue their avid interest in horses. Both of the Holloways are experienced foxhunters and Doctor Holloway has participated in steeplechasing, horse shows and eventing, which is the complete trial of a horse, according to Doctor Holloway. The horse is required to go through three disciplines of dressage, cross country and stadium jumping.

The Holloways have two daughters and one son. Elizabeth, their oldest, is expecting her first child in November. She is married to a partner of Doctor Holloway's, R. Herman Playforth, M.D. Katherine Martin, their second daughter is married to Joseph Martin, an artist, who works at the University. They have two children. Blaine is the Holloway's son and he is a thoroughbred horse trainer in Lexington.

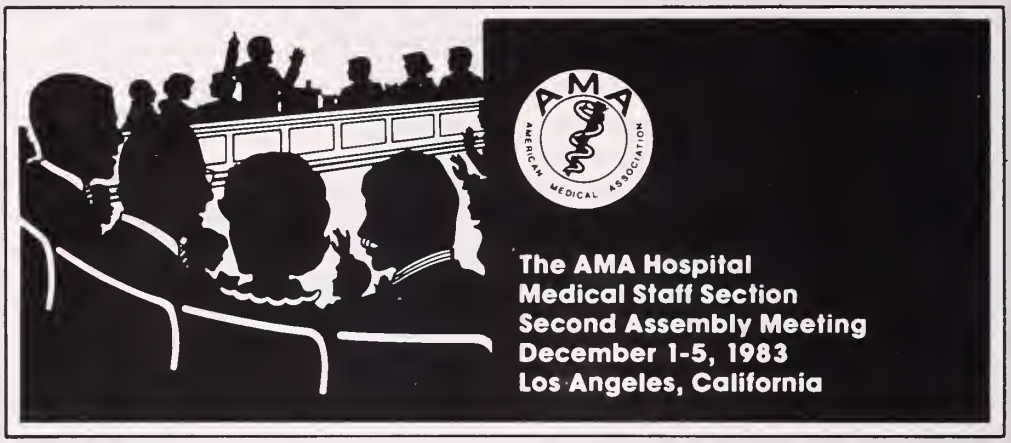


Doctor Holloway feels it is an honor for him to be KMA President. "The leadership of KMA has been so outstanding and has done so much. I hope the organization doesn't drift or step backward while I have the wheel. Our entire effort this year is going to have to be keyed in on the new state administration and the legislature. I feel that the odds may not be in our favor, but nonetheless we will be there. I am certain that the contacts various physicians have with the legislature are going to be enormously important and the tremendous work and skill that Carl Cooper, M.D., has shown in the past is going to be essential.

In spite of the confrontation facing KMA in the next year, Holloway remains confident. "KMA has traditionally shown strong leadership against negative forces and I'm proud to be given the chance to join those leaders."

AMA Hospital Medical Staff Members:

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As a Hospital Medical Staff Representative, you should plan now to attend this four-day AMA Hospital Medical Staff Section Assembly Meeting. You will have an opportunity to contribute to the decision-making process and participate in developing policy that will address the issues and concerns of physicians on hospital staffs.

The AMA Hospital Medical Staff Section provides representatives from hospital medical staffs with a forum to discuss common problems and changes in physician-hospital relations, and a direct voice in policies being considered by the American Medical Association.

Group sessions will be conducted on various topics of interest to hospital medical staff members. Scheduled presentations will include: diagnostic related groups (DRGs), credentialing, hospital contractual relations, prospective reimbursements, and overall relationships between physicians and hospitals.

Here's your opportunity to effect change. For information contact the AMA Department of Hospital Medical Staff Services at (312) 751-6656.

Robert G. Cox Becomes AAMSE President



Robert G. Cox, KMA's Executive Vice President, was installed as the 31st President of the American Association of Medical Society Executives at that groups' Annual Meeting held on August 25-27.

AAMSE is a 37-year-old organization of medical society executives across the country representing county, state, national specialty societies and the AMA. Its main purpose is to further the education of medical society executives and to provide a form for the exchange of ideas.

Cox has previously served on the Board of Directors of AAMSE as well as numerous committees including the AAMSE Advisory Committee to the Executive Vice President of AMA. His term of office runs for one year and he succeeded Willis W. Babb, Executive Director of the California Medical Association.

Postgraduate Page

OCTOBER

5-9	University of Mississippi Medical Center Workshop on Extremity and Spinal Joint Manual Therapy, Hoilday Inn Downtown, Jackson, Miss.
8-16	Eighth Annual International Body Imaging Conference, Maui Surf Hotel, Maui, Hawaii
13-14	Southern Medical Association, Medical Malpractice Seminar, Washington, D.C.
18	Bristol Memorial Hospital and Quillen-Dishner College of Medicine, Antimicrobial Therapy of Life Threatening Infections, Sullins Humanities Center, Bristol, Virginia.
19	East Tennessee State University, Quillen-Dishner College of Medicine, Pain Management, Johnston City, Tennessee
27-29	American Academy of Clinical Anesthesiologists, Quillen-Dishner College of Medicine, Anesthesiology Review Seminar, Gatlinburg, Tennessee.

NOVEMBER

4-5	Bethesda Hospital and Deaconess Association, Cincinnati Cancer Conference: G. I. Malignancies, The Westin Hotel, Cincinnati, OH
4-5	American Rheumatism Association, Central Region Meeting, Knickerbocker Hotel, Chicago, Illinois
4-5	Virginia Lung Association, Quillen-Dishner College of Medicine, Asthma, Martha Washington Inn, Abingdon, Virginia
6-9	Southern Medical Association, Regional Postgraduate Conferences, Baltimore, Maryland
6-9	Southern Medical Association, Annual Scientific Assembly, Baltimore, Maryland
9	Quillen-Dishner College of Medicine, The Management of Stress, Bristol, Tennessee
17-19	The Seventeenth Symposium on Philosophy and Medicine, Mercer University, Macon, Georgia.

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Members in the News

Henry Garretson, M.D., director of the neurosciences program at the University of Louisville's School of Medicine, was elected to the Board of Directors of the American Association of Neurological Surgeons (AANS). He has been with U of L's School of Medicine since 1971.

Doctor Garretson is the pioneer of the surgical technique to remove malformed blood vessels from the brain under local anesthesia, which was developed at U of L. Doctor Garretson is a graduate of the University of Arizona and earned his medical degree at Harvard University. He received his medical degree in cancer research at McGill University in 1968.

Doctor Garretson is a member of the American College of Surgeons, the Society of Neurological Surgeons, the American Academy of Neurological Surgery and the KMA. He is currently serving on the American Board of Neurological Surgeons and has recently been named president-elect of the Society of University Neurosurgeons.

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Digest of Proceedings Meeting of the KMA Board of Trustees August 10-11, 1983

The KMA Board of Trustees met in regular session on Wednesday and Thursday, August 10-11, at the KMA Headquarters Office in Louisville. A primary purpose of the August meeting is to review the reports of the committees to be presented to the House of Delegates which was accomplished along with Board recommendations.

The Board heard reports of the President; Secretary-Treasurer; Auxiliary President; KPRO President-Elect; Senior Delegate to the AMA; Assistant Secretary, State Board of Medical Licensure; and Commissioner for Health Services.

The Board acknowledged with grateful appreciation the years of service Frank M. Gaines, M.D. has given to the State Board of Medical Licensure, and directed that appropriate recognition be given to him.

Nominees were then selected to submit to the Governor for the Board of Medical Licensure and the Hemophilia Advisory Committee and the current *Journal* Editorial Board was reappointed for an additional two-year term.

In other action, the Board adopted a lease agreement between the Kentucky Medical Association and the Kentucky Medical Insurance Company; requested a hearing on regulations dealing with Medical Assistance payments; and tentatively agreed, pending further study, to authorize funds from the Legal Trust Fund to help defray expenses in the Falls City Medical Society's suit against Citicare.

The Trustees then accepted informational reports regarding the Kentucky Health Costs Coalition, the State Health Plan, and President Blackburn's Patient Awareness Program.

The Board members reviewed the Report of the Ad Hoc Committee on Computer Services, and endorsed the Executive Committee's recommendation that the Board cautiously pursue the establishment of a Computer Services Company. The Board further authorized KMA Physicians Services, Inc. to make an initial loan to the new company, if its establishment is endorsed by the KMA House of Delegates.

The next meeting of the Board was set for Sunday, September 18, 1983.

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All advertisements must be approved by the Board of Editors. Deadline is the first of the month preceding the month of publication.
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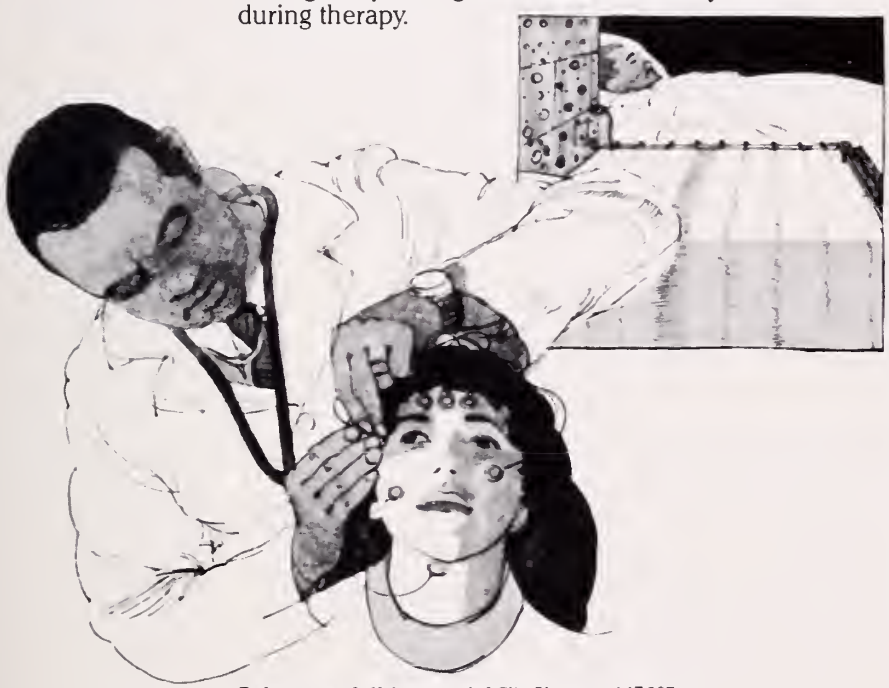
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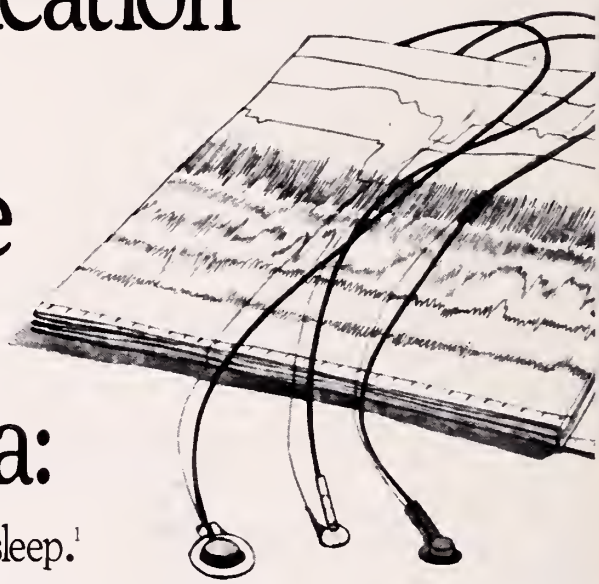
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Malpractice Crisis

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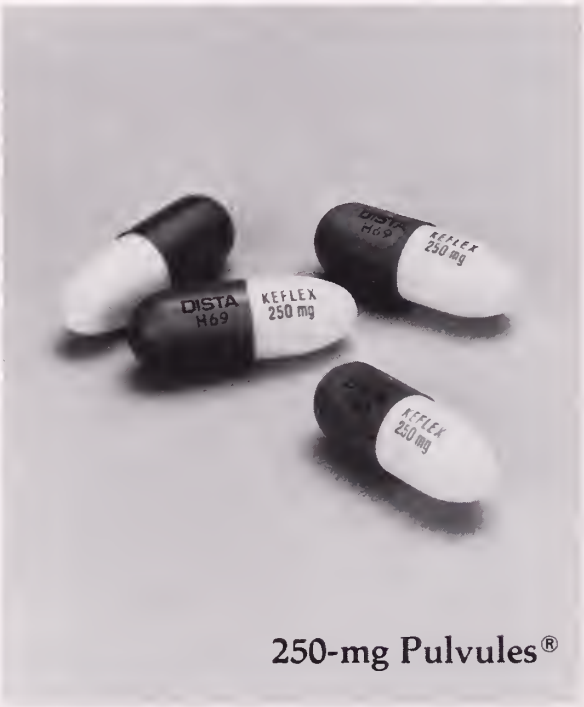
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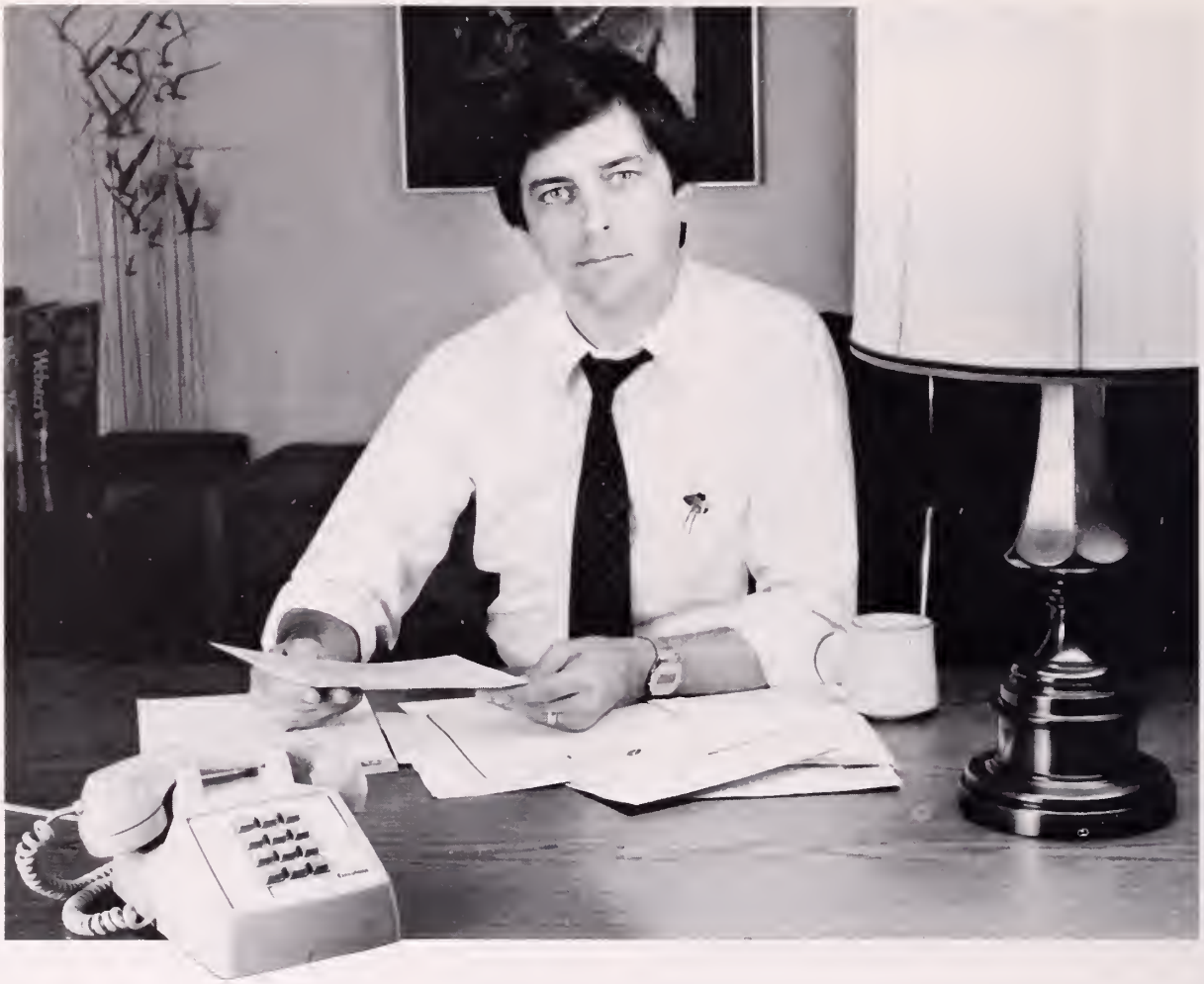
BY THE time you read this message, the Board of the Kentucky Peer Review Organization will have met with representatives of the KMA Board of Trustees. Whether or not we obtain a resolution or modification of the preadmission certification remains to be seen. As I expressed in my remarks at my induction last month, I felt that members of the KPRO Board were elected by the members of the Kentucky Medical Association, and that KPRO Board Members had not lost their identity, their intelligence, nor their integrity when they accepted that job. The decisions made were based on the best knowledge available, and what KPRO Board Members regarded as the best for patients. I think this decision was also made to provide dispensation for the hospitals of Kentucky thus enabling them to collect their fees. I shall report to you in due course about the meeting between the two Boards.

Matters of even greater momentum are sweeping down upon the physicians of this state. The proliferation of PPO's (Preferred Provider Organizations) is threatening the doctor-patient relationship more than one can imagine. PPO's are being formed by hospital chains or individual hospitals. Hospitals using these active, aggressive marketing techniques are out to capture large blocks of patients—principally, those employers of firms who provide hospitalization insurance who are balking at the spiraling cost of health insurance. These particular PPO's, under the auspices of hospitals, are suggesting and promoting the idea that they can reduce the total cost of medical care. It is their hope to capture large blocks of patients by offering a reduction in the cost of medical care to the people who are paying the bills, *ie*, the employers. PPO's are suggesting such things as a $500 bonus or rebate for using their hospital or a $500 out-of-pocket expense if another hospital is used. Once these PPO's capture large blocks of patients whose employers have responded to this economic bribe, one will have to be on the staff of that hospital to promote care to these people. Patients will be coming to the hospital because of the money saved, not to a personal physician. Physicians will then be at the mercy of the hospital, as the hospital will dole out patients to the doctors through economic blackmail, *ie*, we will let you do all of our hernias if you will do them for a set fee, (probably considerably less than what you have charged in the past). You will be chosen because of your hospital affiliation—not because of your reputation or ability.

Preferred Provider Organizations, controlled and steered by physicians, have some merit in that they can get people in and out of the hospital faster and at less hospital cost. Let's face it, hospitals account for 80% of the total costs, physicians only 20%. The patient will still have some choice of physician and hospital. In PPO's controlled by others, physicians become the pawn in the hospital game. At present one sees no way to really control the quality of hospital staffs, the court situation being as it is, the precedence is already set with the court's allowing nearly any physician to practice in a given hospital.

Be thinking of this problem. Let us hear from you with ideas and counsel.

James B. Holloway, Jr., M.D.
KMA President



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Emergencies In Endocrine Surgery

H. WILLIAM SCOTT, JR., M.D., F.A.C.S.

As an introduction to this subject which I have been asked to address, let me give a summary list of emergency problems in Endocrine Surgery that we have encountered at Vanderbilt University Medical Center in the last 30 years that our surgical service has been privileged to help solve. (Table 1) This list includes problems related to the endocrine tumor as well as problems related to its target organ(s).

MASSIVE necrosis of a pheochromocytoma with rupture of the tumor and retroperitoneal hemorrhage is a catastrophic emergency. If the clinical syndrome is not recognized and emergent management instituted promptly, fatality is inevitable.

Case Report #1

A 76-year-old housewife was admitted to the Vanderbilt University Hospital on February 13, 1966 with a diagnosis of pheochromocytoma. She had been hypertensive for seven years. For two and half to three years she had had increasingly frequent episodes of headache, sweating, tachycardia and weakness accompanied by hypertensive crises with systolic pressures measured as high as 300 mm of mercury during an attack. Urinary vanillyl mandelic acid (VMA) on two occasions was 16 mgm and 19 mgm/24 hours.

Physical examination on admission showed blood pressure 280/110. She was a well developed but rather thin elderly woman. Physical examination was normal except for a scaphoid abdomen and a easily palpable 5 cm rounded mass in the left upper quadrant of the abdomen.

Laboratory studies showed serum creatine 1.7 mgm/dl; urinary catecholamines 213 μg/24 hrs; VMA 14.5 mgm/24 hr; and total metanephrines 3.9 mgm/24 hrs (normal $<$1.3 mgm). Blood volume measured by radioiodinated serum albumin was low: 3,006 ml. calculated, 3420 ml predicted. Electrocardiogram showed left ventricular hypertrophy and a prolonged QT interval. Roentgenogram of the chest showed enlargement of the left ventricle.

An intravenous pyelogram showed displacement of the vertical axis of the left kidney. Nephrotomography and retroperitoneal air study showed a left adrenal mass 5 cm. in diameter.

In the hospital, blood pressure ranged from 150/70 to 300/120. It was planned to give the patient three or four days of preoperative adrenergic blockade with phentolamine (Regitine) 50 mgm orally every six hours. After 24 hours of this treatment she developed sudden sharp mid epigastric pain which radiated to the back and to the retrosternal area. The pain was unlike any she had ever previously experienced. Electrocardiogram showed flattening of the T waves but no evidence of myocardial infarction. Systolic blood pressure remained at 250-270 mm of mercury even after 20 mgm of phentolamine intravenously. The left upper quadrant mass was palpably enlarged.

The patient was taken to the operating room promptly where anesthesia was induced with sodium pentathol, nitrous oxide and methoxyflurane. A long midline abdominal incision was placed and a large retroperitoneal hematoma was identified surrounding the left kidney and adrenal. The midline incision was extended into the left hemithorax. Colon and spleen were mobilized medially. The hematoma was evacuated manually and a 9 cm. pheochromocytoma of the left adrenal gland was exposed. (Fig. 1) There was a defect in the tumor capsule about 2 cm in diameter which extended into the center of the necrotic and hemor-



Fig. 1: Case 1: Infarcted and ruptured adrenal pheochromocytoma after operative removal.



Fig. 2: Case 2: Aortography confirmed CT scan in delineating mass in region of right adrenal. Neither diagnostic modality showed any other masses.

rhagic tumor. The tumor with the left adrenal gland and spleen were removed. During the procedure she received four units of whole blood. After the tumor was removed the blood pressure dropped below normal and the patient required neosynephrine 0.1 mgm intravenously on three occasions to sustain normal pressure during closure of the thoracoabdominal incision. At the end of the procedure blood pressure was 140/90. Except for transitory evidence of circulatory overload in the first 12 hours after operation she made a totally uneventful recovery. She was discharged on the 10th postoperative day. Catecholamine excretion in urine was 30 mcg/24 hrs. at the time of discharge.

Followup over the last 16 years has shown no evidence of recurrence of tumor. She has had a mild hypertension controlled by Hydrap-es 50 mgm/day and is approaching her 92nd birthday.

Comment

It is interesting that the patient had sustained her pheochromocytoma for approximately seven years and yet it ruptured in the hospital after 24 hours of alpha adrenergic blockade.

Areas of necrosis are quite common in large pheochromocytomas. However the occurrence of massive necrosis with secondary hemorrhage within the tumor is quite rare. In 1975 when this case of rupture of a pheochromocytoma was reported by Van Way *et al* 11 additional cases of hemorrhagic necrosis and rupture of pheochromocytoma had been recorded.

Two syndromes may result from massive necrosis with secondary hemorrhage within the tumor. On the one hand necrosis of the tumor may impair its release of catecholamines with acute reduction in circulating catecholamines and acute loss of vasoconstriction with ensuing shock. This is generally fatal but not always. The second syndrome of necrosis and hemorrhage occurs if the capsule ruptures following which a massive retroperitoneal hemorrhage occurs which may or may not be associated with shock and vascular collapse.

TABLE 1
EMERGENCIES IN ENDOCRINE SURGERY

Ruptured Pheochromocytoma
Missed Pheochromocytoma
Pheochromocytoma with Ruptured Aneurysm
Pheochromocytoma with Myocardial Infarct
Severe Hypercalcemia with Hyperparathyroidism
Thyroid Crisis in Hyperthyroidism
Non-Ketotic Hyperglycemic Coma with Pheochromocytoma
Ventricular Tachycardia in Hyperaldosteronism
Intestinal Obstruction Due to Tumor in Carcinoid Syndrome
Bleeding Duodenal Ulcer in Zollinger-Ellison Syndrome
Obstructive Uropathy Due to Stone in Hyperparathyroidism
Bleeding Peptic Ulcer in Mastocytosis
Pathologic Fracture Due to Metastatic Pheochromocytoma

A patient with a pheochromocytoma or possible pheochromocytoma who presents with abdominal pain or with shock must be treated as a surgical emergency. Shock must be treated in such a case with vasopressors in addition to blood and fluids. Prompt surgical exploration is mandatory if the patient is to survive. A very dangerous differential diagnostic consideration is myocardial infarction. This is particularly pertinent when left upper quadrant pain develops as in this patient. Expert cardiologic consultation and EKG interpretation are necessary to differentiate the rupture of a left sided pheochromocytoma from a myocardial infarction.

Possibly even more dangerous than ruptured pheochromocytoma is the postoperative problem which presents in a patient with multiple pheochromocytomas in whom one or more of the tumors is missed at operation by the surgeon. The following case illustrates this hazardous problem.

Case Report #2

A 14-year-old white school girl was admitted to Vanderbilt Hospital in June 1979 for evaluation of episodic hypertension. For two years she had had episodes of restlessness, agitation, palpitation, hot flashes, throbbing headaches accompanied by pallor, profuse diaphoresis and tachypnea. Occasionally nausea and vomiting occurred. These spells lasted for 10 minutes to an hour or more. There were no convulsive movements, syncope, visual disturbances, incontinence, wheezing or diarrhea with these episodes. They occurred frequently at night during sleep and her parents had come to recognize their occurrence by her restlessness and thrashing around while sleeping.

Early evaluation by several pediatricians had excluded diabetes, hyperthyroidism, cardiac disease and epilepsy. The patient had been given tranquilizers and her parents received reassurance but the spells persisted and became more frequent and more severe. Upon referral to a cardiologist her blood pressure was found to be elevated to 200/130. Twenty-four hourly collections of urine disclosed elevated catecholamines and metabolites. A diagnosis of pheochromocytoma was made and she was referred to Vanderbilt Hospital.

Physical examination on admission showed her to be a small, slender 14-year-old girl. Admission blood pressure was 150/110. Head, eyes, nose and throat showed no abnormalities. Fundoscopic examination showed normal discs with no exudates, hemorrhages, or vascular changes. Heart and lungs were normal and peripheral pulses were easily palpable, symmetrical, rate 90. No bruits were audible. Abdominal examination showed no palpable masses or organ enlargement. Admission urinalysis, blood chemogram and hematologic indices were normal. Electrocardiogram and x-ray of chest were normal. During the first few days in the hospital blood pressures ranged from 150/90 to 230/150. Collections of urine for catecholamines and metabolites disclosed free catecholamines between 1200 and 2200 mcg/24 hours, vanillyl mandelic acid 9.2 mgm/24 hours and metanephrines 5.0 mgm/24 hours. With a diagnosis of pheochromocytoma confirmed adrenergic blockade was started with phenoxybenzamine 5 mgm twice daily, propranolol 20 mgm every six hours, and catecholamine inhibition was accomplished with metyrosine. In a few days with these drugs blood pressure came into the normal range. A computerized axial tomographic (CAT) scan on the fifth hospital day showed a probable right adrenal mass. No other masses or other abnormalities were seen. Skull films were read as normal. Aortography was then carried out and a mass in the right suprarenal area was delineated. (Fig. 2) No other masses were identified. On June 29, 1979 she was taken to the Operating Room and the abdomen explored through a long midline abdominal incision. The presence of the right adrenal tumor was confirmed. Left adrenal was normal to inspection and palpation. Examination of the paravertebral and retroperitoneal areas and pelvis showed no extra adrenal masses. The right adrenal and a 5 × 4 × 3 cm. brown lobulated tumor were totally excised with only one episode of



Fig. 3: Case 2: Digital subtraction films of aortogram were made after initial operation and showed a 3 cm. mass in midline, epigastric, pancreatic area that had not been seen by CT scan or initial aortography.

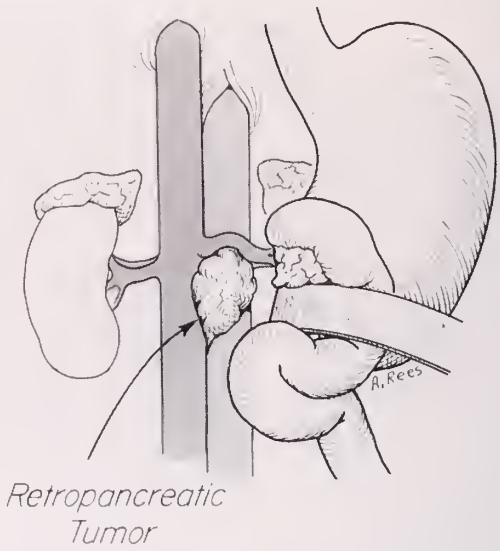


Fig. 4: Case 2: With Kocher's maneuver duodenum and head of pancreas were reflected and the 18 gm. retropancreatic pheochromocytoma easily excised.

hypertension (220/160) during operation. That responded promptly to intravenous phentolamine. After completion of closure of the abdominal incision blood pressure was 170/100. Pulse was 140 and the patient was awake on return to recovery room.

In the early hours after operation she developed rather suddenly an hypertensive crisis with sinus tachycardia in the range of 160. Arterial pressures reached 250/110, despite an intravenous drip of nitroprusside. These frightening hemodynamic changes persisted for many hours despite volume repletion and continued intravenous nitroprusside. Over a 48-hour-period there was gradual fall in arterial pressure to 130/80 and pulse to 110 to 120 and nitroprusside was gradually discontinued. Tachycardia (110-120) and elevation of urinary (430-760 mcg/dl) and plasma (2,001 pg/ml) norephinephrine persisted during the next week.

It was clear that we had missed a second residual pheochromocytoma. As her general condition stabilized she was submitted to inferior vena caval catheterization with sampling of catecholamines at various sites. A sharp rise in catecholamines was identified at the level of the second lumbar vertebra. A bone scan showed no evidence of any skeletal metastases.

A review of the aortographic study was then made and it was discovered that subtraction films had not been made. Accordingly, subtraction films were made (Fig. 3) and demonstrated a clear cut midline 3 cm. tumor mass which had not been seen on CAT scan or aortography. Accordingly she was taken back to the operating room and the midline abdominal incision was opened. Even though the members of the surgical team knew where the tumor was it was impossible to palpate it through the head of the pancreas. With duodenum and head of pancreas reflected, a 3 cm. diameter pinkish tan tumor was disclosed and easily excised. (Fig. 4) Pathologic examination proved this to be a pheochromocytoma.

This young patient made a totally uncomplicated recovery with no persistence of hypertension or any other preoperative problem. Urinary catecholamines were normal prior to discharge. Wound healed per primam and her catecholamines were in the normal range at time of discharge on August 10, 1979. There has been no recurrence of hypertension during the period of followup and she has grown five to six inches in height and developed normally.

Comment

This patient's frightening postoperative catecholamine crisis following the initial operation confirmed for all of us who remained at her bedside what a hazardous problem it is to miss a pheochromocytoma at operation. Secondly, we learned that neither an aortogram or a CAT scan are adequate to diagnose a pheochromocytoma which lies behind the head of the pancreas. Thirdly, we learned that a subtraction film should be made on every patient with suspected pheochromocytoma who has an aortogram. Fourthly, we learned that at operation the surgeon must always in his search for extra-adrenal pheochromocytomas use Kocher's maneuver in reflecting the duodenum and head of pancreas so as to examine the entire length of aorta and inferior cava from diaphragm to pelvis.

In the recognition and treatment of hyperparathyroidism acute parathyroid crisis rarely presents. When it does it is a catastrophic emergency in endocrine surgery.

Case Report #3

A 63-year-old woman was in good health until three years prior to admission to Vanderbilt University Hospital at which time she was found to be hypertensive. Two years later she noted the onset of dysphagia and intermittent sore throat. Eight months prior to admission she had progressive lethargy, irritability, forgetfulness and low back pain. Five months later uterine suspension was performed at another hospital because of back pain. Postoperatively she developed severe persistent nausea and vomiting. Three weeks prior to admission she was hospitalized elsewhere for further treatment of the nausea and vomiting as well as mental confusion, abdominal pain and a 40 pound weight loss. At that time upper and lower gastrointestinal x-rays were normal. Intravenous pyelograms revealed left renal lithiasis. Serum calcium was 16.8 mgm/dl on the day of admission. Because of hypercalcemia, increasing stupor, nausea and projectile vomiting the patient was admitted to Vanderbilt University Hospital on August 1, 1962.

On examination she was a somnolent, white female with evidence of marked weight loss and muscle atrophy. Blood pressure was 200/80 mm of mercury. Pulse 74. Rectal temperature 37.4 C. Skin and mucous membranes were pale and there was evidence of severe dehydration. There was a firm nodular non-tender 2 × 3 cm. mass near the upper pole of the left lobe of the thyroid. The remainder of the gland was entirely normal. Deep tendon reflexes were hypoactive and symmetrical but neurological examination was otherwise normal except for the somnolence. Slit lamp examination of the eyes revealed calcium deposits in the conjunctivae and episclerae bilaterally. There were no other significant abnormalities.

Hematocrit was 32% with slightly hypochromic indices. White blood cell count was 7,800 with normal differential. Urine contained 20-30 white blood cells and 4-8 red blood cells per high power field, serum urea nitrogen was 37 mgm/dl. Serum electrolyte determinations indicated hypercalemic, hyponatremic alkalosis with serum calcium level of 21.2 mgm/dl. Serum inorganic phosphorus 1.8 mgm/dl, alkaline phosphatase 2.0 Bodansky units and tubular reabsorption of phosphate (TRP) 75%. Blood and urine cultures were sterile. EKG showed evidence of hypercalemia and left ventricular hypertrophy. Chest films showed clear lung fields with a normal cardiac silhouette. A plain x-ray film of the abdomen showed left renal stones, cholelithiasis and degenerative changes of the lumbar vertebrae and an old compression fracture of the first lumbar vertebra. X-ray films of the hands showed moderate demineralization with narrowing of the interpharangeal joint spaces but no specific changes characteristic of hyperparathyroidism. Bone marrow aspiration was normal.

Dehydration and electrolyte imbalance were corrected by appropriate intravenous fluid therapy. Large doses of cortico steroids were administered. Thirty-six hours after admission serum calcium level had fallen to 15.2 mgm/dl and cervical exploration was carried out.

Under general anesthesia operative exploration of the neck through a low collar incision showed at the upper pole of the left lobe of the thyroid gland a 3 × 6 cm. cystic mass which was adherent to the thyroid. This mass was removed in continuity with the left lobe of the thyroid and surrounding pretracheal fascia. Initial examination of the frozen section of this mass was interpreted as parathyroid adenocarcinoma but on subsequent permanent sections the diagnosis was chief cell adenoma of the parathyroid gland. By the third postoperative day the serum calcium level returned to normal and tubular reabsorption of phosphate was 90%. Somnolence, nausea and vomiting persisted, however, and on the fifth day the patient became overtly psychotic with agitation and paranoid delusions. At this

point serum magnesium was found to be 1.0 mEq/1. After administration of 5.5 gm magnesium sulphate intramuscularly in repeated doses there was dramatic improvement and within 24 hours the patient was totally rational. This change corresponded to concomitant rise in serum magnesium content to 2.0 mEq/1. Subsequent hospital course was smooth and the patient was discharged on the 11th postoperative day. Followup serum calcium determinations at two, six, 12 and 18 months later were normal.

Comment

Hypomagnesemia has been found in association with hyperthyroidism, generally becoming manifest after removal of excess parathyroid hormone. Metabolic balance studies showed that there is a negative magnesium balance in hyperparathyroidism which is presumably due to mobilization of magnesium from bone and increased urinary excretion. This mobilization and the loss of magnesium were believed to be incidental to mobilization and excretion of calcium rather than to any direct effect of parathyroid hormone on the magnesium ion itself. Once the stimulus of excess parathyroid hormone has been removed there is a rapid uptake of calcium and magnesium into bone as the rate of new bone formation exceeds the rate of resorption and a resultant fall in serum content of both ions occurs.

Central nervous system changes and magnesium deficiency include depression, vertigo, ataxia, muscular weakness, epileptiform seizures. Toxic psychosis has been reported with magnesium deficiency by several authors. This patient's acute hypercalcemic crisis responded well to preoperative hydration and emergent excision of the large parathyroid adenoma. In this patient there was also a long preoperative period of malnutrition; this and the effects of parathyroid hormone on magnesium ion are believed to be responsible for the magnesium deficiency.

References 1. VanWay CW III, Farci RP, Cleveland HC, Foster JH and Scott HW Jr: Hemorrhagic Necrosis of Pheochromocytoma Associated with Phentolamine Administration. *Ann Surg* 184:26, July, 1976. 2. Scott HW Jr, Dean RH, Lea JW IV, Waterhouse G, Sussman C, Robertson D and Oates JA: Surgical Experience with Retro-gastric and Retro-pancreatic Pheochromocytomas. *Surgery* 92:853, November, 1982, No. 5. 3. Jacobs JK and Merritt CR II: Magnesium Deficiency in Hyperparathyroidism: Case Report of Toxic Psychosis, *Ann Surg* 163:260, February, 1966.

Presented at the meeting of the Kentucky Chapter, American College of Surgeons and the Kentucky Medical Association, Lexington, KY, September 21, 1982. From the Department of Surgery, Section of Surgical Sciences, Vanderbilt University Medical Center, Nashville, TN 37232

Percutaneous Subclavian Catheterization

An Unusual Complication

W. STERRETT FOSTER, M.D. AND ZAHI H. MASRI, M.D.

CLINICAL indications for percutaneous catheterization of the subclavian vein have expanded in the 30 years since its introduction and the technique has become widely used. Aubaniac's original article published in 1952 described the resuscitation of an acutely hypovolemic patient with massive subclavian infusions.[1] Since that time the development of more sophisticated equipment and an increased need for access to the central venous circulation have greatly altered this initial concept.

In addition to the emergency restoration of blood and fluids in the volume-depleted patient, subclavian catheterization has been applied to facilitate central venous monitoring, Swan-Ganz catheterization, the administration of irritating or frequently-given medications, total parenteral nutrition, cardiac pacing, hemodialysis, and venous cannulation due to inaccessability of peripheral veins for any reason.[2]

As this technique has been embraced by the medical community, most medical students and house officers have been exposed to its use. Not all physicians, however, are fully cognizant of the many complications that are inherent to this procedure and that are primarily due to blind incursion into a vital anatomic area.

This report describes a complication of subclavian vein catheterization which masqueraded as low cardiac output despite adequate precautions.

Anatomic Considerations

The subclavian vein is considered ideal for venous access because of its large size and easy accessibility. The absence of valves enables direct monitoring of the central venous pressure.[3] Its investment with an extension of the middle cervical fascia adds stability and a resistance to collapse. However, the position of this large vein and its neighboring structures must be appreciated.

As a proximal continuation of the axillary vein starting at the lateral border of the first rib, the subclavian vein arches through the space between the first rib and the clavicle to join the internal jugular vein and form the innominate vein. Superior to its course are the brachial plexus and the subclavian artery, but these are separated from the vein by the anterior scalene muscle which is often one centimeter thick. More medially, the phrenic nerve, internal thoracic artery, and apical pleura are near its walls. Indeed, the apical pleura may be less than one millimeter from the vein. On the left, the thoracic duct enters the vein near the jugular junction.

Case Report

A 63-year-old female with severe diabetes was admitted with a diagnosis of unstable angina, advanced coronary arteriosclerosis, severe left main coronary artery stenosis with good ventricular function, and hypertension. She was taken to the operating room and preparations were made for emergency coronary artery bypass grafting. An arterial line was placed in the left radial artery. Peripheral veins were not visible or palpable and internal jugular venous cannulation was attempted on both sides without success. Two central venous cannulae were then placed separately in the right subclavian vein. There was good back-bleeding from both catheters and a brisk flow of fluids through them. General endotracheal anesthesia was then induced without difficulty.

The heart was approached through a median sternotomy incision and saphenous vein grafts were harvested from both lower extremities. After splitting the sternum, the right pleural cavity was immediately opened as a precaution against a tension pneumothorax on that side and to allow for immediate discovery of any fluid leak into the pleural cavity. It has been a routine practice to open up the ipsi lateral pleural

cavity whenever a subclavian catheter is inserted prior to open heart procedures.

Cardiopulmonary bypass was initiated without difficulty and quadruple bypass grafts were secured in place. Termination of cardiopulmonary bypass was routine and the patient was disconnected from the extracorporeal unit. After approximately five minutes hypotension was noted and a dobutamine drip (250 mg in 500 D_5W) was started. Hypotension persisted despite additional fluid infusion and administration of isoproterenol and norepinephrine. Residual contents of the bypass pump were being returned through the subclavian catheters but had difficulty passing through these lines. The lines were tested again and there was good back-bleeding from them. The right pleural cavity was inspected but there was no fluid or blood accumulation. Examination of the heart revealed good myocardial contractility and patent bypass grafts. Despite the good back-bleeding and seemingly adequate flow, it was apparent that there was an unexplained problem with the various infusions.

The decision was made to re-establish cardiopulmonary bypass but as preparations were made, a large volume of fluid burst into the right pleural cavity. It was immediately evident that all fluids given through the subclavian catheters had actually extravasated and accumulated in the subpleural space. Fluids were promptly re-directed through a large-bore cannula into the right atrium with prompt elevation of blood pressure. A large-bore intravenous cannula was inserted into the saphenous vein of the left thigh for additional fluid infusion, thus bypassing the subclavian system completely. The patient's vital signs stabilized rapidly. The subclavian catheters were removed and the operation proceeded smoothly.

The patient was transferred to the recovery room in good condition. Her vital signs remained stable throughout her hospitalization and she was discharged without incident.

Discussion

Iatrogenic complications of percutaneous subclavian catheterization have been reported with increasing frequency as the technique has gained wider medical usage. Many of these are lethal problems that are not self-limiting.

The most common complication is simple pneumothorax due to the intimate proximity of the apical pleura to the subclavian vein.[4] This is easily recognized in routine chest films and treated with chest tube and suction. It usually has no sequelae. Chronic obstructive pulmonary disease with lung hyperinflation and neck or chest wall deformity adds significantly to its incidence. Cannulation during emergency resuscitation and closed heart massage incurs a greater risk.

Pulmonary problems occurring much less frequently include tension pneumothorax, which necessitates immediate diagnosis and treatment, hydrothorax, and hemothorax.[2,4]

Perforation and cannulation of the subclavian artery is easily diagnosed by high pressure and forceful back-bleeding into the lines. Cardiac tamponade secondary to perforation of the heart has been reported,[7] and broken or knotted catheters have been known to form emboli.[3] Inserting the catheter on the left side of the body can lacerate the thoracic duct and cause chylothorax. Malposition of the catheter tip in the internal jugular often occurs.[8,9] Failure of percutaneous subclavian catheterization on one side should be followed by chest x-ray before further attempts on the other side as a precaution against bilateral pneumothorax.[10]

Neurologic complications include phrenic nerve paralysis, brachial plexus injuries, and even a Horner's syndrome secondary to injury of the stellate ganglion. Air embolus can easily result from an open catheter. An unsuspected right-to-left intracardiac shunt, which may be present in a significant percentage of the general population, and an air embolus could generate central nervous system catastrophe.[11,12] The Trendelenberg position and carefully occluded catheters are simple but important precautions.

Wound infections and their sequelae have a reported incidence of 0% to 9.9% in numerous series.[4,7]

This case presents a previously unreported complication. The drugs and fluids infused through the subclavian catheters extravasated into the subpleural space, which acted as a collecting well until the pressure inside it caused a breach in the pleura. This occurred despite inspection of the right pleural cavity during the procedure and accounted for the ineffectiveness of fluid administration in reversing the patient's hypotension. Adequate back-bleeding from both catheters when one was closed was due to the catheter's position in a pool of blood and fluid. A chest film might have shown this problem under circumstances other than sternotomy and open pleural cavity.

Conclusion

A strong case is made that percutaneous subclavian catheterization is not an innocuous procedure and that serious complications may result. The literature shows that as the level of experience rises the rate of complications decreases dramatically. Rigorous training and a high degree of suspicion and alertness should always accompany this extremely useful technique.

References 1. Aubaniac R: Subclavian intravenous injection. Advantages and technique. *Presse Med* (Paris) 60:1456, 1952. 2. Linos DA, Mucha P, and Van Heerden: The subclavian vein. A golden route. *Mayo Clin Proc* 55:315-21, 1980. 3. Kaiser CW, et al: Choice of route for central venous cannulation: subclavian or internal jugular vein? A prospective randomized study. *J Surg Onc* 17:345-54, 1981. 4. Bernard RW, Stahl W: Subclavian vein catheterization, a prospective study. *Ann Surg* 73:184-90, 1971. 5. Yarom R: Subclavian venipuncture. *Lancet* 1:45, 1964. 6. McLean R, Walls AH: Central venous catheterization. *Ann Roy Coll Surg Eng* 62:454-58, 1980. 7. Borja A, Masri ZH: Unusual and lethal complications of infraclavicular subclavian vein catheterization. *Internatl Surg* 57:42-45, 1972. 8. Gatti JE, Mullin JL: The malpositioned subclavian catheter. *Surg Gynecol Obstet* 153:91-2, 1981. 9. Linos DA, Mucha P: A simplified technique for the placement of permanent central venous catheters. *Surg Gynecol Obstet* 154:248-50, 1982. 10. Herbst CA: Indications, management, and complications of percutaneous subclavian catheters. *Arch Surg* 113:1421-25, 1978. 11. Voegele D: Routine subclavian vein catheterization in abdominal surgical practice. *Am J Surg* 131:178-80, 1976. 12. Scapira M, Stern WZ: Hazards of subclavian vein cannulation for central venous pressure monitoring. *JAMA* 201:327-9, 1967.

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Acute Ischemic Heart Disease

An Empirical Trial in the Use of the Pozen and D'Agostino Formula

H. THOMAS WIEGERT, M.D. AND OLGA WIEGERT, M.P.A.

One hundred twenty-three patients admitted to the coronary care unit at the Central Baptist Hospital in Lexington, Kentucky with a diagnosis of suspected myocardial infarction (M.I.) had a "probability" for acute ischemic heart disease calculated utilizing the formula of Pozen, D'Agostino et al. *The "prevalence" rate for myocardial infarction (M.I.) in this group of patients was 49.6%. Utilizing ≤ 0.40 as the discriminating value we were able to confirm the high sensitivity (98%) of the formula. The predictive value of the formula in identifying those patients who did not have a myocardial infarction was also high, 96%. Inclusion of this "probability" calculation in clinical decision making should improve the utilization of coronary care beds without placing patients who have myocardial infarction at risk.*

IN view of mounting emphasis on cost containment,[1,2] certificate of need requirements, and high capital construction costs, hospitals and physicians must make more efficient use of existing resources. This is particularly true for those beds devoted to one type utilization such as coronary care units (CCU). Cooper and Corcoran[3] described a theoretical model for avoiding the over construction of CCU beds. Pozen *et al*[4] described another alternative pertinent to community hospitals with resident training programs which impinge upon CCU resources. They described a probability formula to reduce inappropriate admissions to a CCU and suggested trials in other settings to determine the usefulness of the instrument. We carried out an empirical trial to test the formula on a group of patients admitted to the CCU at Central Baptist Hospital (CBH) in Lexington, Kentucky with a diagnosis of suspected myocardial infarction (M.I.). CBH is a general community hospital with 297 beds and a medical staff of 382 members. The acute CCU has seven beds and the intermediate CCU has 15 beds. Thirty-one physicians have admitting privileges to the CCU including the faculty of the University of Kentucky Department of Family Practice. The hospital serves as the major teaching site for second and third year Family Practice residents of the University of Kentucky College of Medicine. The goal of this empirical trial was to improve the identification of those patients who were unlikely to have an acute myocardial infarction. Three questions were proposed:

1. Given a "prevalence" rate of approximately 50% for myocardial infarction in those patients suspected of having a myocardial infarction and admitted to a coronary care unit (CCU), could additional criteria be utilized which would increase the relative "prevalence" rate for M.I. from 50% to 60%? (A gain of this magnitude is clinically significant.)
2. Given the additional criteria, could one identify ≥ 95% of the patients in the population admitted to the CCU who subsequently have a final diagnosis of myocardial infarction?
3. In a study to consider the additional criteria, could the predictive negative value of a chosen cutoff point for a diagnosis of other than myocardial infarction be ≥ 95%?

The Pozen, D'Agostino *et al*[4] probability formula was devised by appropriately weighting symptoms and electrocardiographic findings that were significantly correlated with autopsy findings to develop a probability of acute ischemic heart disease. Analysis of 105 variables yielded nine predictors of acute ischemic heart disease.

Table 1 lists the predictors and the values assigned by Pozen *et al* for each of the nine items. The sum

TABLE I

POZEN, D'AGOSTINO ET AL PREDICTORS AND WEIGHTINGS

1. INITIAL ECG, ST SEGMENTS IN ANY LEAD	Abnormal (1.68)	Normal (3.36)
2. INITIAL ECG, T WAVE IF ABNORMAL AND INVERTED 1 mm OR MORE OR ELEVATED MORE THAN 25% OF THE HEIGHT OF THE R WAVE IN ANY LEAD	Yes (1.61)	No (3.22)
3. CHEST PAIN LOCATED IN LOWER OR MID-STERNUM	Yes (1.58)	No (3.16)
4. HISTORY OF PREVIOUS M.I.	Yes (1.56)	No (3.12)
5. INITIAL ECG, ST SEGMENTS IF ABNORMAL AND DEPRESSED 1 mm OR MORE OR ELEVATED 1 mm OR MORE IN ANY LEAD	Yes (1.41)	No (2.82)
6. PATIENT REPORTS OF DYSPNEA	Yes (1.10)	No (2.20)
7. PATIENT REPORTS CHEST PAIN MOST IMPORTANT SYMPTOM	Yes (0.96)	No (1.92)
8. HISTORY OF ANGINA PECTORIS	Yes (0.86)	No (1.72
9. INITIAL ECG, T WAVES IN ANY LEAD	Abnormal (0.45)	Normal (0.90)

of the values for the nine predictors become one of the values utilized in the formula to calculate the probability.* A sum of greater than 17.5 gave a probability value of less than 0.40. A value of less than 17.5 gave a probability value of more than 0.40. For example, in a patient with chest pain in the lower or mid sternum who reports that as the most important symptom, has no prior history of M.I. or angina, has no dyspnea, a normal initial electrocardiogram, and has a sum of the nine predictors equal to 19.88, the probability of acute ischemic heart disease is approximately 0.08.

Methods

Patients in this pilot study were those suspected of having an M.I. and who had been admitted to the acute CCU by internists, cardiologists, and family physicians. Patients with admitting diagnosis of unstable pre-existing angina and new onset angina were not included in this study. The Pozen *et al* symptoms and history were elicited from each patient and each initial electrocardiogram was reviewed at the time the decision was made to admit the patient to the CCU. The multiple criteria for suspecting myocardial infarction utilized by the physicians who have admitting privileges to the CCU currently result in a final diagnosis of myocardial infarction in approximately 50% of the patients admitted to the CCU for suspected myocardial infarction.

*For those interested, the formula and the program written for the Texas Instrument TI 59 hand held calculator is available from the authors.

The "probability" of acute ischemic heart disease was calculated by the formula of Pozen *et al.* The criteria, weights and formula were used as they described.

Prior to starting this study, an arbitrary decision was made by the authors to use "p" = 0.40 as the cutoff to attempt to improve the "sensitivity" to $\geq$ 95%. Those patients with a "probability" $>$ 0.40 were predicted to be at the highest risk to have an M.I. subsequently diagnosed. Those patients below or less than 0.40 were predicted to be least likely to have an M.I. as the final diagnosis on discharge from the CCU.

Results

Table 2 depicts our data with "p" 0.40 as the cutoff point.

The sensitivity of the Pozen and D'Agostino formula for this group of patients who had a final diagnosis of M.I. was 98%. The predictive negative value of the formula "P" value of $\leq$ 0.40 for a diagnosis of other than M.I. was $>$ 96%.

Discussion

Our empirical trial, using the Pozen, D'Agostino *et al* formula, tends to confirm its usefulness. Had this probability formula with a cutoff point $>$ 0.40 been utilized as a major criteria for admission for this group of patients to the CCU, the "prevalence" rate for the diagnosis of myocardial infarction would have been raised from 49.6% to 62.5%. This answers our first question—that the additional criteria apparently raises the "prevalence" rate of the diagnosis of M.I. in those

TABLE 2
WIEGERT STUDY DATA ARRANGED IN TABULAR FORM

SENSITIVITY 98%
SPECIFICITY 42%
PREVALENCE 49.6%

	DIAGNOSIS M.I.	Non-M.I.	Totals
Predictive Instrument $P > 0.40$	60 (True Positive)	36 (False Positive)	96
Predictive Instrument $P \leq 0.40$	1 (False Negative)	26 (True Negative)	27
TOTALS	61	62	123

PREDICTIVE POSITIVE VALUE OF FORMULA FOR M. I. $p > 0.40$ $60/96 \times 100 = 62.5\%$

PREDICTIVE NEGATIVE VALUE OF FORMULA FOR NON-M.I. $p \leq 0.40$ $26/27 \times 100 = 96.3\%$

admitted with a suspected M.I. from 50% to $\geq$ 60%. A probability value of > 0.40 correctly identifies 60 or 61 patients for a "sensitivity" of 98% and answers our second question of being able to identify $>$ 95% of patients who have a diagnosis of M.I. in those patients who are suspected of having an M.I.

The predictive negative value of the Pozen and D'Agostino formula with a cutoff of ≤ 0.40 for the diagnosis of symptoms without M.I. was 96% and answers our third question of being able to identify that group of patients who would not have a diagnosis of M.I. with a $\geq$ 95% predictive negative value.

Had a probability of > 0.40 been applied as a major criterion for admission to the CCU for this group of patients, 27 of 123 admissions could have been observed safely in a setting other than the CCU. If regular hospital beds had been utilized, the minimum cost savings would have been approximately $400 per patient. Thibault *et al*[9] reported an average cost of $2,000 per patient for a group of patients admitted to a CCU with a diagnosis of suspected M.I. and who were discharged with a diagnosis of unexplained chest pain.

If the results of this pilot study are verified in other empirical trials, the Pozen and D'Agostino probability formula could assist physicians in utilization of CCU beds by quantifying the physicians' qualitative assessments. We urge others to carry out additional trials to test the utility of the Pozen and D'Agostino formula in predicting that group of patients who are unlikely to have a final diagnosis of acute myocardial infarction.

References 1. Abel-Smith, Brian: Health care in a cold economic climate. *Lancet*, Feb. 14, 1981, 373-376. 2. Weinstein MC and Stason WB: Foundations of cost-effectiveness analysis for health and medical practices. *N Engl J. Med*, 1977, 296:716-721. 3. Cooper JK and Corcoran TM: Estimating bed needs by means of queuing theory. *N Engl J Med*, 1974, 291:404-405. 4. Pozen MW, D'Agostino RB, Mitchell JB, *et al:* The usefulness of a predictive instrument to reduce inappropriate admission to the coronary care unit. *Ann Int Med*, 1980, 92(Part I) 238-242. 5. Pearce ML and Chapman MG: The evaluation of Q aVF by the initial sagittal QRS vectors in 70 autopsied cases. *Am Heart J*, 1957, 53:782-788. 6. Myers GB, Klein HA, and Hiratzka T: Correlation of electrocardiographic and pathologic findings in posterolateral infarction. *Am Heart J*, 1949, 38:547. 7. Grande P, Christiansen C, Pederse A, *et al:* Optimal diagnosis of acute myocardial infarction: A cost effectiveness study. *Circulation*, 1980, 61 No. 4 723-728. 8. Galen RS, Reiffel JA, Gambino RS: Diagnosis of acute myocardial infarction. Relative efficiency of serum enzyme and isoenzyme measurements. *JAMA*. April 14, 1975, Vol. 232 No. 2, 145-147. 9. Thibault GE, Mullen AG, Barnett GO, *et al:* Medical intensive care: Indications, interventions and outcomes. *N Engl J Med*. 1978, 299:76-80.

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Mortality Trends for the Leading Causes of Death Among Adult Kentuckians, 1960-1980

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We analyzed the age-specific and age-adjusted mortality rate trends from 1960 to 1970 to 1980 for the three leading causes of death among adult Kentuckians: heart disease, cancer and cerebrovascular disease. We also compared these rates and trends to those for the total U.S. population. In general, but with notable exceptions, mortality rates for all causes, heart disease and cerebrovascular disease fell and mortality rates for cancer rose during the study period. Exceptions included an increase in total and heart disease mortality rates from 1960 to 1970 among several age groups and a decrease in cancer mortality rates from 1970 to 1980 among persons age 35-44. Comparisons with U.S. population mortality rates suggest a progressive worsening of Kentucky's relative position over time for all three leading causes. Risk factors for and primary prevention of these causes of death are briefly discussed.

THE dramatic shift in leading mortality causes from acute and infectious diseases to chronic diseases since the beginning of this century is well known.[1] Less well publicized are the substantial shifts in chronic disease mortality which have occurred in more recent time periods. From 1960 through 1980, the three leading causes of death among adult Kentuckians (defined as age 35 and older for the purposes of this paper) have been heart disease, cancer and cerebrovascular disease, in that order. However, when one examines the age-specific and age-adjusted mortality rates for these causes, as we do herein, it is obvious that what may appear superficially to be a stable situation is really quite dynamic.

Methods

Cause-specific deaths among residents of Kentucky age 35 and older were obtained from the Health Information and Vital Statistics Branch of the Kentucky Department for Health Services. All deaths were grouped by age of occurrence as follows: 35-44, 45-54, 55-64, 65-74 and 75+. In addition to total deaths, deaths from the three leading causes (heart disease, cancer and cerebrovascular disease) were identified. Heart disease deaths included those with ICD (7th revision) codes of 400-402 and 410-443 in 1960, ICD (8th revision) codes of 390-398, 402, 404 and 410-429 in 1970 and ICD (9th revision) codes of 390-398, 402 and 404-429 in 1980. Cancer deaths included those with ICD (7th revision) codes of 140-205 in 1960, ICD (8th revision) codes of 140-209 in 1970 and ICD (9th revision) codes of 140-208 in 1980. Cerebrovascular deaths included those with ICD (7th revision) codes of 330-334 in 1960, ICD (8th revision) codes of 430-438 in 1970, and ICD (9th revision) codes of 430-438 in 1980.

Total and age-specific populations for Kentucky were obtained from published sources[2,3] and used to calculate age-specific and age-adjusted mortality rates. Age-adjustment was performed using the direct method with the 1970 U.S. population as a standard. Age-adjusted rates were restricted to ages 35-74 for two reasons: first, the cause of death is often less vigorously pursued among the very elderly and is thus more likely to be misclassified; and second, the open-ended age category

TABLE 1

THE THREE LEADING CAUSES OF DEATH AMONG KENTUCKIANS AGE 35 AND OLDER IN 1960, 1970 AND 1980

Cause of Death	Number of Deaths (%)		
	1960	1970	1980
Heart Disease	11,098(42.4)	12,955(43.1)	13,224(42.5)
Cancer	4055(15.5)	5155(17.1)	6561(21.1)
Cerebrovascular Disease	3786(14.5)	3890(12.9)	3114(10.0)
All other	7222(27.6)	8086(26.9)	8239(26.4)
Total	26,161(100.0)	30,086(100.0)	31,138(100.0)

TABLE 2

A COMPARISON OF ANNUAL AGE-ADJUSTED* LEADING CAUSE-SPECIFIC MORTALITY RATES PER 100,000 PERSONS AGE 35-74 OF BOTH SEXES AND ALL RACES, KENTUCKY AND THE TOTAL U.S., 1960, 1970 AND 1980

Cause of Death	Year	Annual Deaths/100,000		†Kentucky - U.S. Difference (%)
		Kentucky	U.S.	
All	1960	1318	1348	−2.2
	1970	1353	1288	+5.0
	1980	1152	1054	+9.3
Heart Disease	1960	535	561	−4.6
	1970	539	499	+8.0
	1980	441	376	+17.3
Cancer	1960	263	281	−6.4
	1970	297	295	+0.7
	1980	326	306	+6.5
Cerebrovascular Disease	1960	143	130	+10.0
	1970	118	107	+10.3
	1980	70	63	+11.1

*Direct method using 1970 U.S. population as a standard.

†$\frac{\text{Kentucky rate} - \text{U.S. rate}}{\text{U.S. rate}} \times 100$

(74+) is a potential source of residual confounding by age, thus making the comparison of rates from different populations more subject to misinterpretation.

Age- and cause-specific mortality rates for the total United States were obtained from published sources for 1960,[4] 1970[5] and 1980,[6] and age-adjustment was performed in the same manner as for Kentucky rates.

Results

As can be seen in Table 1, heart disease, cancer and cerebrovascular disease have predominated as causes of death among adult Kentuckians during the period of 1960-1980, accounting for almost three-fourths of all deaths. The proportion of deaths attributable to heart disease has changed very little, but cancer and cerebrovascular disease have shown increasing and decreasing importance, respectively, over time.

Crude numbers of deaths give little information about the changing risk of cause-specific death over time, however, and must be adjusted for changes in population size and age distribution. In Table 2, time trends in age-adjusted mortality rates per 100,000 for heart disease, cancer and cerebrovascular disease are compared for Kentuckians and the total U.S. population ages 35-74. Although age-adjusted mortality rates in the U.S. have been consistently falling for all causes, heart disease and cerebrovascular disease, this has been true only for cerebrovascular disease in Kentucky. Instead, rates for all causes and heart disease increased among Kentuckians from 1960 to 1970, before showing a substantial decrease from 1970 to 1980. Cancer mortality rates consistently increased over time both for Kentuckians and the total United States.

Although Kentuckians age 35-74 compared favorably with the total U.S. with respect to heart disease, cancer and total mortality in 1960, that position reversed over time such that Kentuckians in this age group had a 9.3% greater mortality rate overall, a 17.3% greater

TABLE 3

A COMPARISON OF PERCENTAGE CHANGE OVER TIME IN ANNUAL AGE-ADJUSTED LEADING CAUSE-SPECIFIC MORTALITY RATES PER 100,000 PERSONS AGE 35-74 OF BOTH SEXES AND ALL RACES, KENTUCKY AND THE TOTAL U.S.

Cause of Death	Comparison Years	*Percentage Change in Mortality Rate	
		Kentucky	U.S.
All	1960 to 1970	+2.7%	−4.5%
	1970 to 1980	−14.9	−18.2
	1960 to 1980	−12.6	−21.8
Heart Disease	1960 to 1970	+0.7	−11.1
	1970 to 1980	−18.2	−24.7
	1960 to 1980	−17.6	−33.1
Cancer	1960 to 1970	+12.9	+5.1
	1970 to 1980	+9.8	+3.5
	1960 to 1980	+24.0	+8.8
Cerebrovascular Disease	1960 to 1970	−17.8	−17.9
	1970 to 1980	−40.8	−41.4
	1960 to 1980	−51.3	−51.9

*$\frac{\text{Rate for later year} - \text{Rate for earlier year}}{\text{Rate for earlier year}} \times 100$

heart disease mortality rate and a 6.5% greater cancer mortality rate in 1980 (Table 2). Cerebrovascular disease mortality rates have been decreasing steadily over time at about the same rate in Kentucky and the U.S., although the relative position for Kentucky appears to be becoming slightly more unfavorable.

Table 3 demonstrates the percentage changes in age-adjusted mortality rates between 1960-1970, 1970-1980 and 1960-1980. One striking observation is that for all comparisons, Kentucky consistently shows a less favorable change than the total U.S. This is particularly true for cancer mortality rates, which have been increasing at about 10% per decade in Kentucky, but at 5% or less per decade in the total U.S.

In Tables 4 and 5 are shown, respectively, the age-specific mortality rates for 1960, 1970 and 1980 among Kentuckians and the percentage change in these rates over time. This age-specific examination illustrates that the trends seen for the age-adjusted rates are not necessarily reflected in all age groups. For instance, total mortality rates did decrease consistently from 1960 to 1970 to 1980 among Kentuckians age 65-74 and 75+, but not among younger age groups. However, the percentage decrease in overall and heart disease mortality rates has been usually greatest for the younger age groups, while the decrease in cerebrovascular disease mortality rates has been greatest for the older age groups, particularly ages 55-74.

The increase in cancer mortality rates has been greatest for ages 55-74, and in fact, cancer rates actually decreased substantially among persons age 35-44 from 1970 to 1980.

Discussion

Our examination of age-adjusted and age-specific mortality rates for the leading causes of death among Kentuckians age 35 and older indicates that cause-specific mortality risk has been changing substantially over the past two decades in this population. Before discussing the above findings in detail, however, the recognized problem with accuracy of death certification should be mentioned. A number of studies have documented that the underlying cause of death as coded from the death certificate may not agree with the underlying cause of death based on autopsy findings in combination with pertinent clinical data.[7,8] In general, death certificates tend to underreport cancer as a cause of death and overreport vascular disease.[7] Unfortunately, too little information on the degree of erroneous death certification during different time periods is available to estimate how such errors might have affected the data presented in this study. At least two points are worth noting, however. First, although there are problems with the accuracy of death certification, such problems will not affect total mortality rates. Therefore, the differences between the 1960, 1970 and 1980 total mortality rates for Kentucky and the U.S. cannot be ascribed to death certification errors (Table 2). Second, the degree of change over time in the age-specific mortality rates from heart disease, cancer and

TABLE 4

ANNUAL AGE-SPECIFIC MORTALITY RATES PER 100,000 KENTUCKIANS OF BOTH SEXES AND ALL RACES BY CAUSE AND YEAR, 1960, 1970 AND 1980

Cause of Death	Year	Annual Deaths/100,000 by Age Group 35-44	45-54	55-64	65-74	75+
All	1960	327.7	773.1	1656.8	3665.2	10,865.8
	1970	354.5	802.9	1751.2	3633.5	10,292.6
	1980	247.4	657.7	1495.6	3235.9	9,183.9
Heart Disease	1960	80.7	273.6	704.3	1613.3	4,878.1
	1970	77.8	281.7	708.4	1621.7	4,817.7
	1980	52.9	219.9	582.6	1360.7	4,295.0
Cancer	1960	67.5	181.3	365.3	625.9	1,052.3
	1970	70.3	196.7	427.8	709.4	1,151.1
	1980	50.9	202.7	477.6	838.2	1,221.1
Cerebrovascular Disease	1960	16.7	50.1	161.6	523.4	2,085.2
	1970	16.9	46.2	130.5	417.6	1,863.7
	1980	12.6	32.8	75.6	235.0	1,312.5

cerebrovascular disease is not consistent among the five age groups (Table 5). If changes in death certification practices alone were responsible for the cause-specific mortality rate trends, one would expect to see a consistent degree of change across the age groups. This lack of consistency suggests that the age- and cause-specific trends observed are probably due to factors other than changes in death certification. Nevertheless, we caution against over-interpretation of these data, as the contribution of death certification errors to some of the observed trends must remain uncertain.

Each of the three leading adult mortality causes, heart disease, cancer and cerebrovascular disease, is believed to have a multifactorial etiology and to be preventable in some instances and amenable to medical intervention in others. Thus the population mortality risk for these diseases can be influenced by both the population's level of exposure to etiologic risk factors and the population's access to effective therapy once the disease is present. Consequently, the identification of specific reasons for the observed mortality trends is difficult if not impossible. However, a brief review of the known major risk factors for heart disease, cancer and cerebrovascular disease is warranted, as it is highly possible that a substantial proportion of the observed change in mortality risk for these disease groups is secondary to altered exposure to etiologic factors.

The primary subcategory of heart disease mortality as defined in this study is ischemic heart disease. The major risk factors for ischemic heart disease, which have been rather consistently identified by numerous prospective studies over the past 25 years, are cigarette smoking, hypertension and hypercholesterolemia.[9] The epidemiologic evidence for a causal association between these factors and ischemic heart disease is strong and in general agreement with findings from other research approaches (clinical, pathological and animal experimental studies). These major risk factors are known to be widely prevalent in the United States population and thus a significant potential for disease control is present. Physicians and other health professionals can obviously play a key role in such control in many ways. For instance, cigarette smoking can be discouraged in patients both by the setting of a nonsmoking example, as is being done by about 80% of U.S. physicians,[10] and by directly counseling smoking patients on the health consequences of their habit. Major achievements over the past 30 years have made the clinical control of most hypertension possible through medication. The value of drug treatment for hypertension in the reduction of mortality has been well demonstrated,[11] even in patients with "mild" hypertension (diastolic pressures of 90-104). Some evidence also suggests that hypertension in selected patients may be controlled with weight reduction,[12] reduced salt intake,[13] physical training[14] or relaxation techniques.[15] The issue of the benefits of reduction of hypercholesterolemia is perhaps more controversial than is true for smoking cessation or hypertension control,[16] but few would argue that there are any known negative effects of a reduction of serum cholesterol to levels of 200-220 mg. percent, at which the 10-year risk of death from ischemic heart disease is about one-half that associated with serum levels of 250mg. percent or more.[17] Hypercholesterolemia can be reduced by acceptable dietary changes and, in fact, the mean serum cholesterol levels in the

TABLE 5

PERCENTAGE CHANGE OVER TIME IN ANNUAL AGE-SPECIFIC MORTALITY PER 100,000 FROM ALL CAUSES, HEART DISEASE, CEREBROVASCULAR DISEASE AND CANCER IN KENTUCKIANS OF BOTH SEXES AND ALL RACES, 1960-1980

Cause of Death	Comparison Years	*Percentage Change in Mortality Rate by Age Group				
		35-44	45-54	55-64	65-74	75+
All	1960-1970	+8.2%	+3.9%	+5.7%	−0.9%	−5.3%
	1970-1980	−30.2	−18.1	−14.6	−10.9	−10.8
	1960-1980	−24.5	−14.9	−9.7	−11.7	−15.5
Heart Disease	1960-1970	−3.6	+3.0	+0.6	+0.5	−12.4
	1970-1980	−32.0	−21.9	−17.8	−16.1	−10.9
	1960-1980	−34.4	−19.6	−17.3	−15.7	−12.0
Cancer	1960-1970	+4.2	+8.5	+17.1	+13.3	+9.4
	1970-1980	−27.6	+3.1	+11.6	+18.2	+6.1
	1960-1980	−24.6	+11.8	+30.7	+33.9	+16.0
Cerebrovascular Disease	1960-1970	+1.2	−7.8	−19.2	−20.2	−10.6
	1970-1980	−25.4	−29.0	−42.1	−43.7	−29.6
	1960-1980	−24.6	−34.1	−53.2	−55.1	−37.1

*$\frac{\text{Rate for later year} - \text{Rate for earlier year}}{\text{Rate for earlier year}} \times 100$

U.S. population have shown a significant reduction over the past 20 years.[18] This reduction is probably explainable by known changes in the composition of the U.S. diet during this period.[19] In addition to the three major risk factors for ischemic heart disease discussed above, two other factors, physical inactivity and overweight, have been suggested to increase risk in some studies.[9,20]

The avoidable risk factors for cancer have been recently reviewed most thoroughly.[21] By far the most important reliably known contributor to cancer risk in the U.S. is tobacco use, primarily in the form of cigarette smoking, which may be responsible for 30% of current U.S. cancer deaths. Indeed, the proportion of U.S. cancer deaths attributable to tobacco use is still increasing due to delayed effects among those who began cigarette smoking in earlier decades. The majority of cancer deaths attributable to tobacco use are, of course, from lung cancer, but many deaths from cancer of the mouth, pharynx, larynx, esophagus, bladder and pancreas are due to tobacco use also.[22] Dietary factors, although not presently well-defined, are thought to be next most important in contributing to preventable cancer deaths.[21] Increased cancer risk may be associated with high fat consumption,[23] low dietary fiber,[24] low consumption of fruits and vegetables,[25] low dietary beta-carotene[26] and perhaps other factors. Additional important contributors to cancer mortality include ethanol consumption, occupational carcinogens and sexual and reproductive factors.[21]

The physician and other health professionals can be instrumental in primary cancer prevention, particularly through influencing patients to avoid both tobacco use and excessive ethanol consumption and to adopt a diet relatively low in fat and relatively high in fruits, vegetables and fiber-rich foods such as whole grains and legumes. The tobacco and dietary recommendations for reducing cancer risk clearly are in agreement with those for reducing heart disease risk, suggesting double benefits when the recommendations are followed.

Hypertension is the risk factor most strongly associated with cerebrovascular disease, in particular atherosclerotic brain infarction.[27,28] Control of hypertension to prevent heart disease mortality can thus be expected also to have multiple benefits. Elevated blood lipids may also be a risk factor for cerebrovascular disease as well as heart disease,[27] thus adding to the incentive for reducing hyperlipidemia.

This comparison of leading cause-specific mortality rates among adults in Kentucky and the U.S. clearly suggests a potential for further reduction in the mortality rates among Kentuckians. In 1980, there were 11,841 deaths from heart disease, cancer and cerebrovascular disease among persons age 35-74 in Kentucky.[6] This is 1580 fewer deaths from these causes than would have occurred if the Kentucky 1960 age-specific death rates had pertained in 1980. However, had the age-specific mortality rates from these causes been the same in Kentucky in 1980 as in the total U.S., only 10,767 such deaths would have occurred, a further reduction

of 1074 deaths. Although, as stated previously, it is difficult, if not impossible, to identify the specific causal factors involved in the changing Kentucky mortality rates discussed above, we believe it more likely that differential exposure to disease risk factors, rather than differential exposure to effective medical care of disease, is responsible for the unfavorable position of Kentuckians relative to the total U.S. population. Physicians and other health professionals in Kentucky should consider it part of their responsibility to work toward a reduction in exposure to risk factors for these diseases among Kentuckians.

References 1. Stumbo G, Allen DT, Nelson R: Changing patterns in the threats to health for Kentuckians 1900-1980. *J Kentucky Med Assn* 79:291-296, 1981. 2. Bureau of the Census: Detailed characteristics, Kentucky Summary, 1970 Census of Population, PC (1) D19, p. 535, 1972. 3. Urban Studies Center: Kentucky Demographics, 1980 Census of Kentucky, Special Report No. 7, University of Louisville, 1982. 4. U.S. Dept. of HEW: Vital Statistics of the U.S., Vol. II, part A, 1963, pp. 1-26 to 1-33. 5. U.S. Dept. of HEW: Vital Statistics of the U.S., Vol. II, part A, 1974, pp. 1-26 to 1-44. 6. U.S. Dept. of HEW: Monthly Vital Stat Rep, Vol. 29, No. 13, 1981, pp. 18-19. 7. Engel LW, Strauchen JA, Chiazze L, Heid M: Accuracy of death certification in an autopsied population with specific attention to malignant neoplasms and vascular diseases. *Am J Epidemiol* 111:99-112, 1980. 8. James G, Patton RE, Heslin AS: Accuracy of cause-of-death statements on death certificates. *Pub Health Rep* 70:39-51, 1955. 9. Pooling Project Research Group: Relationships of blood pressure, serum cholesterol, smoking habit, relative weight and ECG abnormalities to incidence of major coronary events. *J Chron Dis* 31:201-306, 1978. 10. Sterling TD and Weinkam JJ: Smoking characteristics by type of employment. *J Occup Med* 18:743-754, 1976. 11. Hypertension Detection and Follow-up Program Cooperative Group: The effect of treatment on mortality in "mild" hypertension. *N Engl J Med* 307:976-980, 1982. 12. Reisin E, Abel R, Modan M, Silverberg DS, Eliahon HE, Modan B: Effect of weight loss without salt restriction on the reduction of blood pressure in overweight hypertensive patients. *N Engl J Med* 298:1-6, 1978. 13. Dahl LK: Salt and hypertension. *Am J Clin Nutr* 25:231-244, 1972. 14. Choquette G, Ferguson RJ: Blood pressure reduction in "borderline" hypertensives following physical training. *Can Med Assn J* 108:699-703, 1973. 15. Benson H: Systemic hypertension and the relaxation response. *N Engl J Med* 296:1152-1156, 1977. 16. Stamler J: Lifestyles, major risk factors, proof and public policy. *Circ* 58:3-19, 1978. 17. Wright IS and Frederickson DT (Eds.): Cardiovascular Diseases—Guidelines for Prevention and Care. DHEW Pub. No. (HSM) 73-7022, Washington, D.C., 1973. 18. Beaglehole R, LaRosa JC, Heiss GE, Davis CE, Rifkind BM, Muesing RM, Williams OD: Secular changes in blood cholesterol and their contribution to the decline in coronary mortality. In, Proceedings of the Conference on the Decline in Coronary Heart Disease Mortality. NIH Pub. No. 79-1610, pp. 282-297, 1979. 19. Page L, Marston RM: Food consumption patterns—U.S. diet. In, *Ibid* pp. 236-243. 20. Paffenbarger RS: Countercurrents of physical activity and heart attack trends. In, *Ibid*, pp. 298-311. 21. Doll R, Peto R: The causes of cancer: quantitative estimates of avoidable risks of cancer in the United States today. JNCI 66:1191-1308, 1981. 22. U.S. Dept. of HEW: Smoking and Health, a Report of the Surgeon General. DHEW Pub. No. (PHS) 79-50066, pp. 5-1 to 5-74, 1979. 23. Jain M, Cook GM, David FG, Grace MG, Howe GR, Miller AB: A case-control study of diet and colorectal cancer. *Int J Cancer* 26:757-768, 1980. 24. Modan B, Barell V, Lubin F, Modan M, Greenberg RA, Graham S: Low-fibre intake as an etiologic factor in cancer of the colon. *J Natl Cancer Inst* 55:15-18, 1975. 25. Graham S, Dayal H, Swanson M, Mittelman A, Wilkinson G: Diet in the epidemiology of cancer of the colon and rectum. *J Natl Cancer Inst* 61:709-714, 1978. 26. Peto R, Doll R, Buckley JD, Sporn MB: Can dietary beta-carotene materially reduce human cancer rates? *Nature* 290:201-208, 1981. 27. Kannel WB: Current status of the epidemiology of brain infarction associated with occlusive arterial disease. *Stroke* 2:295-318, 1971. 28. Veterans Administration Cooperative Study Group on Antihypertension Agents: Effects of treatment on morbidity in hypertension. *JAMA* 213:1143-1152, 1970.

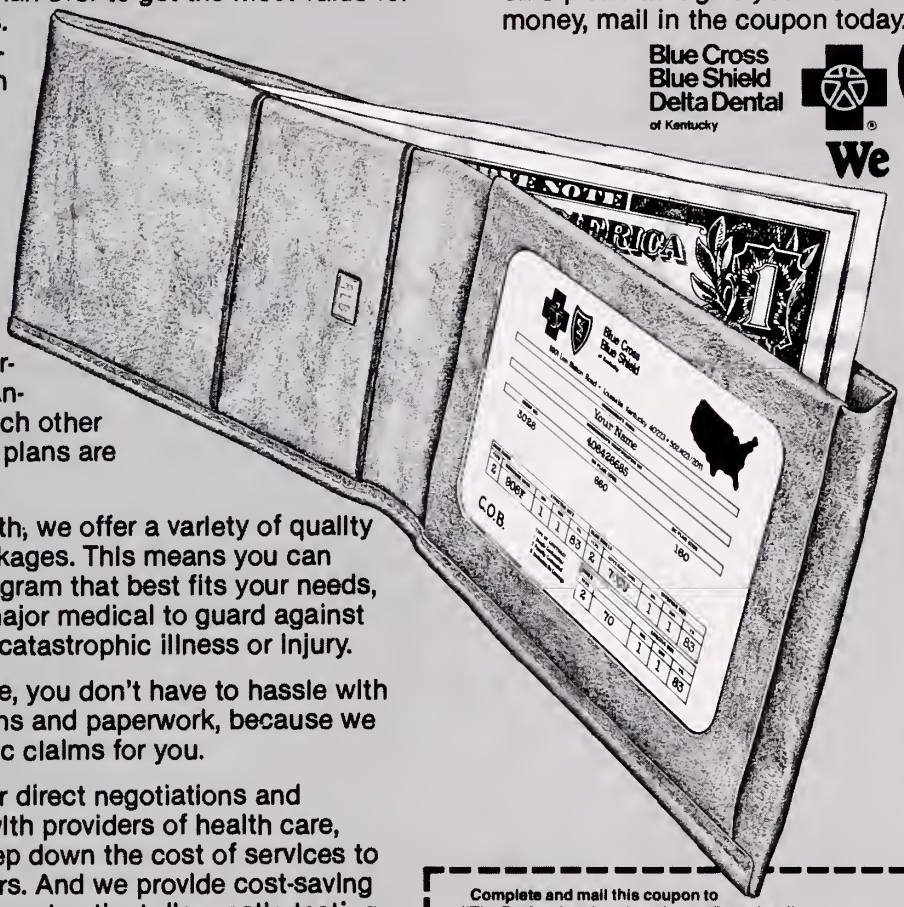
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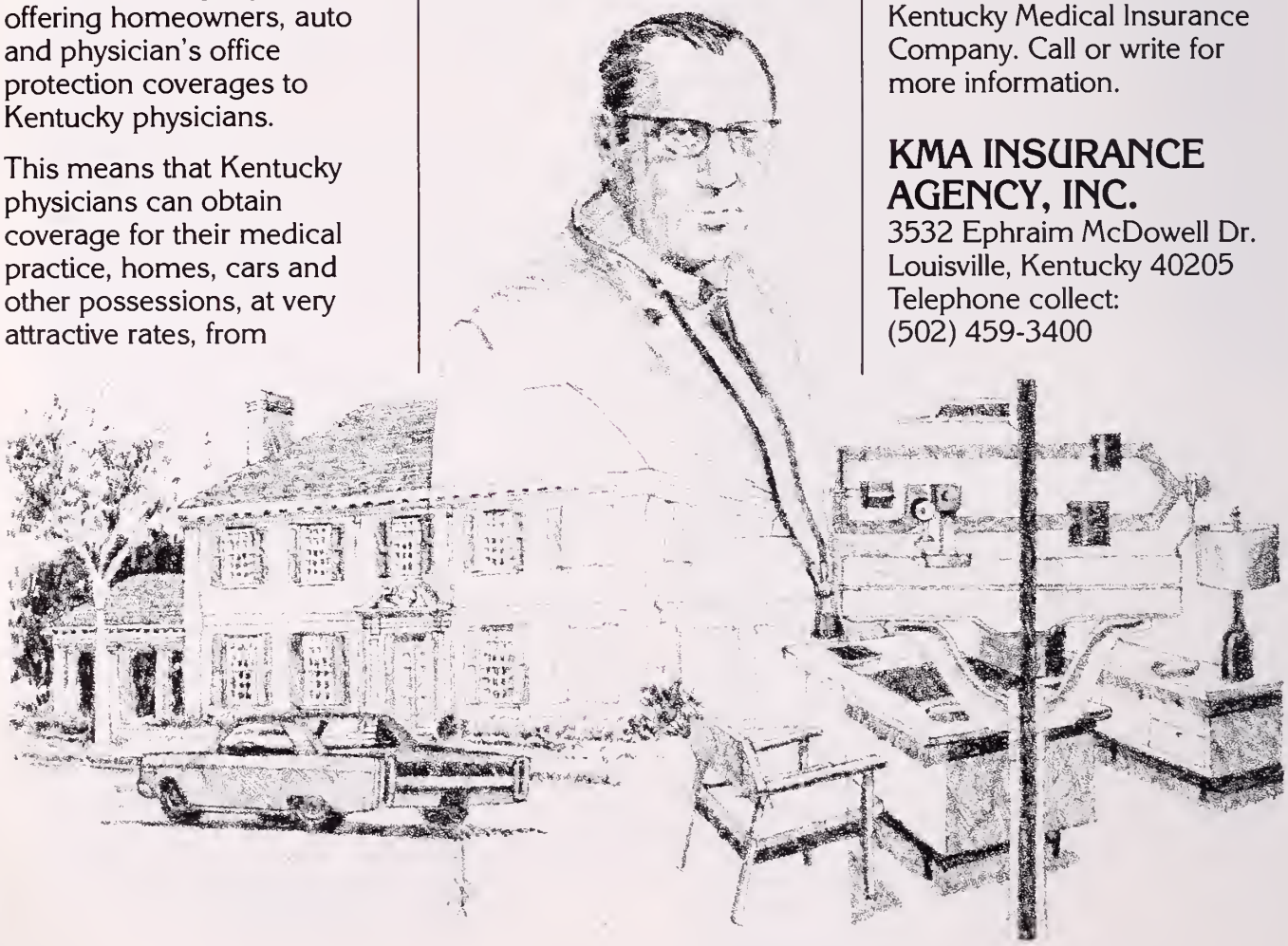
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Yet another benefit Valium affords is flexibility. Available in 2-mg, 5-mg and 10-mg scored tablets, Valium enables you to titrate dosage to individual patient needs. For the geriatric patient, a starting dosage of 2 to 2½ mg once or twice a day is recommended. And, for patients who forget or skip medication, you can prescribe Valrelease™ (diazepam/Roche) 15-mg slow-release capsules, knowing that Valrelease will assure all the benefits of Valium 5 mg *t.i.d.* with the convenience of once-a-day dosage.

Discontinuation of Valium (or Valrelease) is typically as smooth as its start in short-term therapy. However, Valium and Valrelease should be discontinued gradually after more extended treatment. As you diminish dosage, the built-in tapering action of Valium and Valrelease will help avoid rapidly recurring anxiety symptoms and symptoms of withdrawal, and will help ease the patient's transition to independent coping when therapeutic goals have been achieved.

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For a summary of product information, please turn the page.

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Injectable Valium® (diazepam/Roche) Ⓝ

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of anxiety disorders, or short-term relief of symptoms of anxiety. Anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic. Symptomatic relief of acute agitation, tremor, impending or acute delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: relief of skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome. *Oral forms* may be used adjunctively in convulsive disorders, but not as sole therapy. *Injectable form* may also be used adjunctively in: status epilepticus; severe recurrent seizures; tetanus; anxiety, tension or acute stress reactions prior to endoscopic/surgical procedures; cardioversion.

The effectiveness of diazepam in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindications: Tablets or capsules in children under 6 months of age; known hypersensitivity; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: As with most CNS-acting drugs, caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of predisposition to habituation/dependence.

> ***Usage in Pregnancy:*** **Use of minor tranquilizers during first trimester should almost always be avoided because their use is rarely a matter of urgency and because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

ORAL Advise patients against simultaneous ingestion of alcohol and other CNS depressants.

Not of value in treatment of psychotic patients; should not be employed in lieu of appropriate treatment. When using oral forms adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may be associated with temporary increase in frequency and/or severity of seizures.

INJECTABLE *To reduce the possibilty of venous thrombosis, phlebitis, local irritation, swelling and, rarely, vascular impairment when used I.V.: inject slowly, taking at least one minute for each 5 mg (1 ml) given, do not use small veins,* i.e., *dorsum of hand or wrist; use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Injectable Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.*

Administer with extreme care to elderly, very ill, those with limited pulmonary reserve because of possibility of apnea and/or cardiac arrest, concomitant use of barbiturates, alcohol or other CNS depressants increases depression with increased risk of apnea; have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosage at least 1/3, administer in small increments. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs.

Has precipitated tonic status epilepticus in patients treated for petit mal status or petit mal variant status. Not recommended for OB use.

Efficacy/safety not established in neonates (age 30 days or less); prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence; can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects — particularly with known compounds which may potentiate action of diazepam, *i.e.*, phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function; avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed and tolerated).

The clearance of diazepam and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.

INJECTABLE Although promptly controlled, seizures may return; readminister if necessary; not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures; use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, observed in patients during and after diazepam therapy are of no known significance.

INJECTABLE Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia.

In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm/pain in throat or chest have been reported.

Dosage: Individualize for maximum beneficial effect.

ORAL: *Adults:* Anxiety disorders, relief of symptoms of anxiety—Valium (diazepam/Roche) tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 Valrelease capsules (15 to 30 mg) daily. Acute alcohol withdrawal—tablets, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; or 2 capsules (30 mg) the first 24 hours, then 1 capsule (15 mg) daily as needed. Adjunctively in skeletal muscle spasm—tablets, 2 to 10 mg t.i.d. or q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily. Adjunctively in convulsive disorders—tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily.

Geriatric or debilitated patients: Tablets—2 to 2½ mg 1 or 2 times daily initially, increasing as needed and tolerated (see Precautions). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose.

Children: Tablets—1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use in children under 6 months). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose (not for use in children under 6 months).

INJECTABLE: Usual initial dose in older children and adults is 2 to 20 mg I.M. or I.V., depending on indication and severity. Larger doses may be required in some conditions (tetanus). In acute conditions injection may be repeated within 1 hour, although interval of 3 to 4 hours is usually satisfactory. Lower doses (usually 2 to 5 mg) with slow dosage increase for elderly or debilitated patients and when sedative drugs are added. (See Warnings and Adverse Reactions.)

For dosages in infants and children see below; have resuscitative facilities available.

I.M. use: by deep injection into the muscle.

I.V. use: inject slowly, take at least one minute for each 5 mg (1 ml) given. Do not use small veins, i.e., *dorsum of hand or wrist. Use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute Valium with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.*

Moderate anxiety disorders and symptoms of anxiety, 2 to 5 mg I.M. or I.V., and severe anxiety disorders and symptoms of anxiety, 5 to 10 mg I.M. or I.V., repeat in 3 to 4 hours if necessary; acute alcohol withdrawal, 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary. Muscle spasm, in adults, 5 to 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary (tetanus may require larger doses); in children *administer I.V. slowly*; for tetanus in infants over 30 days of age, 1 to 2 mg I.M. or I.V., repeat every 3 to 4 hours if necessary; in children 5 years or older, 5 to 10 mg repeated every 3 to 4 hours as needed. Respiratory assistance should be available.

Status epilepticus, severe recurrent convulsive seizures (I.V. route preferred), 5 to 10 mg adult dose administered slowly; repeat at 10- to 15-minute intervals up to 30 mg maximum. Repeat in 2 to 4 hours if necessary, keeping in mind possibility of residual active metabolites. Use caution in presence of chronic lung disease or unstable cardiovascular status. Infants (over 30 days) and children (under 5 years), 0.2 to 0.5 mg slowly every 2 to 5 min., up to 5 mg (I.V. preferred). Children 5 years plus, 1 mg every 2 to 5 min., up to 10 mg (slow I.V. preferred), repeat in 2 to 4 hours if needed. EEG monitoring may be helpful.

In endoscopic procedures, titrate I.V. dosage to desired sedative response, generally 10 mg or less but up to 20 mg (if narcotics are omitted) immediately prior to procedure; if I.V. cannot be used, 5 to 10 mg I.M. approximately 30 minutes prior to procedure. As preoperative medication, 10 mg I.M.; in cardioversion, 5 to 15 mg I.V. within 5 to 10 minutes prior to procedure. Once acute symptomatology has been properly controlled with injectable form, patient may be placed on oral form if further treatment is required

Management of Overdosage: Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure; employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension. Dialysis is of limited value.

How Supplied:

ORAL: Valium scored tablets — 2 mg, white; 5 mg, yellow; 10 mg, blue — bottles of 100 and 500; Prescription Paks of 50, available in trays of 10; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25 and in boxes containing 10 strips of 10.

Valrelease (diazepam/Roche) slow-release capsules — 15 mg (yellow and blue), bottles of 100; Prescription Paks of 30.

INJECTABLE Ampuls, 2 ml, boxes of 10; Vials, 10 ml, boxes of 1. Tel-E-Ject® (disposable syringes), 2 ml, boxes of 10. Each ml contains 5 mg diazepam, compounded with 40% propylene glycol, 10% ethyl alcohol, 5% sodium benzoate and benzoic acid as buffers, and 1.5% benzyl alcohol as preservative.

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EDITORIAL



Malpractice Crisis

THE malpractice crisis has not subsided. The number of claims is burgeoning and the amount of awards is shocking. The original crisis of being unable to obtain insurance coverage has yielded to a frantic increase in claims activity and our careful vigilance against this disastrous threat must be continual.

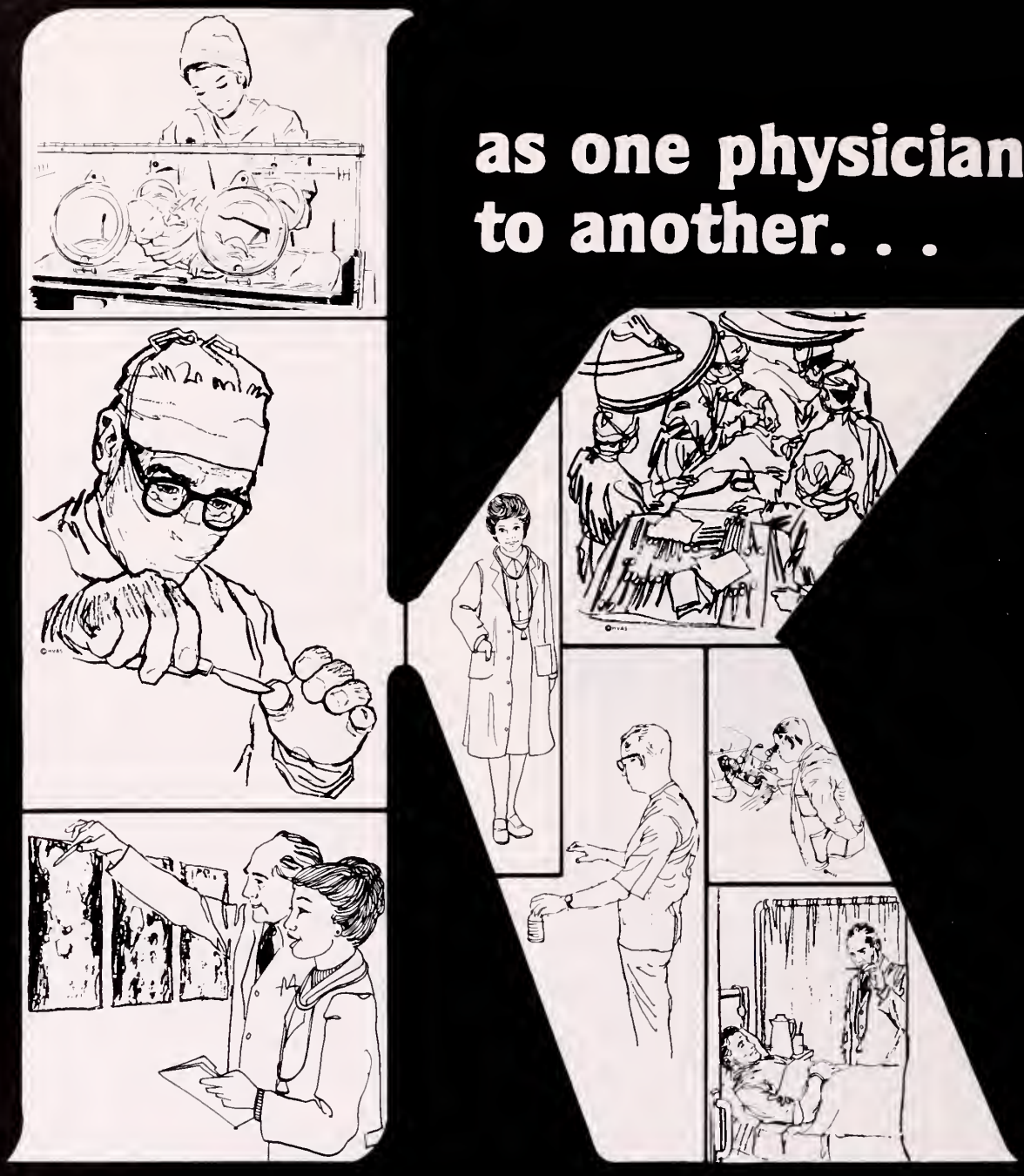
The Kentucky Medical Insurance Company has developed an energetic and imaginative program for claims prevention which should be attended carefully by all KMA members. A panel composed of lawyers and insurance experts discusses with doctors the many factors which influence their risk and try to emphasize pitfalls to avoid.

The importance of maintaining patient communication with the sick and their concerned families is described. They teach us to recognize signs of breaking communication. They reemphasize the importance of complete records. They point out the untoward results of trying to change records or to deal untruthfully with patients. They describe our responsibilities as they walk us through a malpractice suit. They explain the mechanisms and meaning of legal maneuvering which we would rather not, but must understand and anticipate. They show us how a reconciliation hearing can be of maximum benefit to the suing attorney and of no positive value to the doctor. They explain the ways they can and cannot help us and lead us to the important conclusion that we must be responsible for ourselves and how we can improve our responsibility.

The panel is thoughtfully composed of intelligent teachers. Carl Wedekind, President and Riley Lassiter, Vice President of KMIC are experienced and articulate spokesmen for the company. John Ballantine and Larry Franklin are outspoken and clear thinking representatives of the defense attorney and the plaintiff attorney.

The profound influence of prevention in medicine has such dramatic illustrations as vaccination and fluoride distribution. It is commendable that the KMIC has undertaken such a large effort to help us in claims prevention. It is important for all Kentucky doctors to be closely acquainted with this distinguished panel. We hope that insurance, lawyers and doctors will continue their sincere efforts for prevention.

A. Evan Overstreet, M.D.



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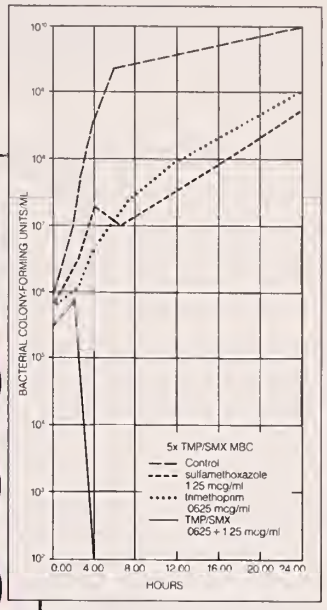
Bactericidal activity with minimal resistance

Percent of isolates of common uropathogens sensitive to BACTRIM and to other antimicrobials

	Escherichia coli	*Klebsiella pneumoniae*	*Proteus mirabilis*	*Proteus vulgaris*	*Proteus sp.*	*Enterobacter sp.*	*Enterobacter aerogenes*	*Enterobacter cloacae*
BACTRIM	**96%** 328,598	**89%** 63,551	**93%** 62,691	**84%** 4174	**91%** 4381	**88%** 1736	**96%** 7326	**92%** 11,856
ampicillin	72% 345,209	5% 65,466	85% 67,338	16% 4381	70% 4402	10% 1775	9% 7759	11% 12,091
cephalexin†	81% 343,339	85% 67,031	92% 67,027	16% 4398	80% 4365	22% 1834	13% 7571	12% 11,846
nitrofur-antoin	97% 307,785	65% 61,162	7% 59,775	13% 3848	14% 3059	67% 1707	60% 7109	67% 10,830

†Analogous to cephalothin, the primary antibiotic disc used in testing.
Source: The Bacteriologic Report, BAC-DATA Medical Information Systems, Inc., Winter Series, 1981-82.
Numbers under percentages refer to the projected number of isolates tested.

RAPID *IN VITRO* DESTRUCTION OF *E. COLI**



Kill curve kinetics of Bactrim and its individual components against *E. coli in vitro*.[1]

The bactericidal action of Bactrim has been demonstrated *in vitro* on laboratory strains of *E. coli*[1,2] and on clinical isolates of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis* and *Morganella morganii*[3]—the most common causative organisms of urinary tract infections.[4] More than 100 published studies attest to the efficacy of Bactrim in recurrent urinary tract infections due to these organisms.[5] In comparative studies with other antimicrobials, Bactrim has consistently demonstrated unsurpassed efficacy during therapy.[6-11]

Resistance to Bactrim develops more slowly than to either of its components alone *in vitro*.* Among urinary tract isolates, resistance has rarely emerged in susceptible strains.[5,12] Bactrim is contraindicated in pregnancy at term, during lactation, in infants less than two months old and in documented megaloblastic anemia due to folate deficiency.

Initial episodes of uncomplicated urinary infections should be treated with a single-agent antimicrobial.

Bactrim™ DS

(trimethoprim and sulfamethoxazole/Roche)

b.i.d. *for recurrent urinary tract infections*

**In vitro* data do not necessarily predict clinical results.

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See next page for references and a summary of product information.

References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Kramer MJ, Mauriz YR, Robertson TL, Timmes MD: Morphological studies on the effect of subinhibitory and inhibitory doses of sultamethoxazole-trimethoprim combination on *Escherichia coli*. Presented at the 12th International Congress of Chemotherapy, Florence, Italy, Jul 19-24, 1981. 3. Spicehandler J *et al: Rev Infect Dis* 4:562-565, Mar-Apr 1982. 4. Stamey TA: *Pathogenesis and Treatment of Urinary Tract Infections*. Baltimore, Williams & Wilkins, 1980, p. 13. 5. Ronald AR: *Clin Ther* 3:176-189, Mar 1980 6. Cooper J, Brumfitt W, Hamilton-Miller JMT: *J Antimicrob Chemother* 6:231-239, 1980. 7. Gower PE, Tasker PRW: *Br Med J* 1:684-686, Mar 20, 1976. 8. Cosgrove MD, Morrow JW: *J Urol* 111:670-672, May 1974. 9. Iravani A *et al: Antimicrob Agents Chemother* 19:598-604, Apr 1981. 10. Schaeffer AJ, Flynn S, Jones J: *J Urol* 125:825-827, Jun 1981. 11. Rous SN: *J Urol* 125:228-229, Feb 1981. 12. BAC-DATA Medical Information Systems, Inc., Bacteriologic Reports, Winter Series, 1976-82.

Bactrim™ DS

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, hepatocellular necrosis, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended, therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients. *Pregnancy:* Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, hepatocellular necrosis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: *Not recommended for infants less than two months of age.*

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS:

Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100 and 500; Tel-E-Dose* packages of 100; Prescription Paks of 20. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose* packages of 100; Prescription Paks of 40. *Pediatric Suspension,* containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension,* containing 40 mg trimethoprim and 200 mg sulfamethoxazole per tea spoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint)

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

References:
1. Stone PH, Turi ZG, Muller JE: Efficacy of nifedipine therapy for refractory angina pectoris. *Am Heart J* 104:672-681, September 1982.
2. Antman E, Muller J, Goldberg S, et al: Nitedipine therapy for coronary-artery spasm: Experience in 127 patients. *N Engl J Med* 302:1269-1273, June 5, 1980.

BRIEF SUMMARY

PROCAROIA* (nifedipine) **CAPSULES** For Oral Use

INDICATIONS AND USAGE: I. Vasospastic Angina: PROCAROIA (nifedipine) is indicated for the management of vasospastic angina confirmed by any of the following criteria: 1) classical pattern of angina at rest accompanied by ST segment elevation, 2) angina or coronary artery spasm provoked by ergonovine, or 3) angiographically demonstrated coronary artery spasm. In those patients who have had angiography, the presence of significant fixed obstructive disease is not incompatible with the diagnosis of vasospastic angina, provided that the above criteria are satisfied. PROCAROIA may also be used where the clinical presentation suggests a possible vasospastic component but where vasospasm has not been confirmed, e.g., where pain has a variable threshold on exertion or in unstable angina where electrocardiographic findings are compatible with intermittent vasospasm, or when angina is refractory to nitrates and or adequate doses of beta blockers.

II. Chronic Stable Angina (Classical Effort-Associated Angina): PROCAROIA is indicated for the management of chronic stable angina (effort-associated angina) without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and or organic nitrates or who cannot tolerate those agents.

In chronic stable angina (effort-associated angina), PROCARDIA has been effective in controlled trials of up to eight weeks duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in those patients are incomplete.

Controlled studies in small numbers of patients suggest concomitant use of PROCAROIA and beta blocking agents may be beneficial in patients with chronic stable angina, but available information is not sufficient to predict with confidence the effects of concurrent treatment, especially in patients with compromised left ventricular function or cardiac conduction abnormalities. When introducing such concomitant therapy, care must be taken to monitor blood pressure closely since severe hypotension can occur from the combined effects of the drugs. (See Warnings.)

CONTRAINDICATIONS: Known hypersensitivity reaction to PROCARDIA.

WARNINGS: Excessive Hypotension: Although in most patients, the hypotensive effect of PROCARDIA is modest and well tolerated, occasional patients have had excessive and poorly tolerated hypotension. These responses have usually occurred during initial titration or at the time of subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta blockers.

Severe hypotension and or increased fluid volume requirements have been reported in patients receiving PROCAROIA together with a beta blocking agent who underwent coronary artery bypass surgery using high dose fentanyl anesthesia. The interaction with high dose fentanyl appears to be due to the combination of PROCARDIA and a beta blocker, but the possibility that it may occur with PROCAROIA alone, with low doses of fentanyl, in other surgical procedures, or with other narcotic analgesics cannot be ruled out. In PROCARDIA treated patients where surgery using high dose fentanyl anesthesia is contemplated, the physician should be aware of these potential problems and if the patient's condition permits, sufficient time (at least 36 hours) should be allowed for PROCAROIA to be washed out of the body prior to surgery.

Increased Angina: Occasional patients have developed well documented increased frequency, duration or severity of angina on starting PROCARDIA or at the time of dosage increases. The mechanism of this response is not established but could result from decreased coronary perfusion associated with decreased diastolic pressure with increased heart rate, or from increased demand resulting from increased heart rate alone.

Beta Blocker Withdrawal: Patients recently withdrawn from beta blockers may develop a withdrawal syndrome with increased angina, probably related to increased sensitivity to catecholamines. Initiation of PROCARDIA treatment will not prevent this occurrence and might be expected to exacerbate it by provoking reflex catecholamine release. There have been occasional reports of increased angina in a setting of beta blocker withdrawal and PROCAROIA initiation. It is important to taper beta blockers if possible, rather than stopping them abruptly before beginning PROCAROIA.

Congestive Heart Failure: Rarely, patients, usually receiving a beta blocker, have developed heart failure after beginning PROCAROIA. Patients with tight aortic stenosis may be at greater risk for such an event.

PRECAUTIONS: General: Hypotension: Because PROCARDIA decreases peripheral vascular resistance, careful monitoring of blood pressure during the initial administration and titration of PROCAROIA is suggested. Close observation is especially recommended for patients already taking medications that are known to lower blood pressure. (See Warnings.)

Peripheral edema: Mild to moderate peripheral edema, typically associated with arterial vasodilation and not due to left ventricular dysfunction, occurs in about one in ten patients treated with PROCAROIA. This edema occurs primarily in the lower extremities and usually responds to diuretic therapy. With patients whose angina is complicated by congestive heart failure, care should be taken to differentiate this peripheral edema from the effects of increasing left ventricular dysfunction.

Drug Interactions: Beta-adrenergic blocking agents. (See Indications and Warnings.) Experience in over 1400 patients in a non-comparative clinical trial has shown that concomitant administration of PROCAROIA and beta-blocking agents is usually well tolerated, but there have been occasional literature reports suggesting that the combination may increase the likelihood of congestive heart failure, severe hypotension or exacerbation of angina.

Long-acting nitrates: PROCAROIA may be safely co-administered with nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.

Digitalis: Administration of PROCARDIA with digoxin increased digoxin levels in nine of twelve normal volunteers. The average increase was 45%. Another investigator found no increase in digoxin levels in thirteen patients with coronary artery disease. In an uncontrolled study of over two hundred patients with congestive heart failure during which digoxin blood levels were not measured, digitalis toxicity was not observed. Since there have been isolated reports of patients with elevated digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing PROCAROIA to avoid possible over- or under-digitalization.

Carcinogenesis, mutagenesis, impairment of fertility: When given to rats prior to mating, nifedipine caused reduced fertility at a dose approximately 30 times the maximum recommended human dose.

Pregnancy: Category C. Please see full prescribing information with reference to teratogenicity in rats, embryotoxicity in rats, mice and rabbits, and abnormalities in monkeys.

ADVERSE REACTIONS: The most common adverse events include dizziness or light-headedness, peripheral edema, nausea, weakness, headache and flushing each occurring in about 10% of patients; transient hypotension in about 5%; palpitation in about 2% and syncope in about 0.5%. Syncopal episodes did not recur with reduction in the dose of PROCARDIA or concomitant antianginal medication. Additionally, the following have been reported: muscle cramps, nervousness, dyspnea, nasal and chest congestion, diarrhea, constipation, inflammation, joint stiffness, shakiness, sleep disturbances, blurred vision, difficulties in balance, dermatitis, pruritus, urticaria, fever, sweating, chills and sexual difficulties. Very rarely, introduction of PROCAROIA therapy was associated with an increase in anginal pain, possibly due to associated hypotension.

In addition, more serious adverse events were observed, not readily distinguishable from the natural history of the disease in these patients. It remains possible, however, that some or many of these events were drug related. Myocardial infarction occurred in about 4% of patients and congestive heart failure or pulmonary edema in about 2%. Ventricular arrhythmias or conduction disturbances each occurred in fewer than 0.5% of patients.

Laboratory Tests: Rare, mild to moderate, transient elevations of enzymes such as alkaline phosphatase, CPK, LDH, SGOT, and SGPT have been noted, and a single incident of significantly elevated transaminases and alkaline phosphatase was seen in a patient with a history of gall bladder disease after about eleven months of nifedipine therapy. The relationship to PROCAROIA therapy is uncertain. These laboratory abnormalities have rarely been associated with clinical symptoms. Cholestasis, possibly due to PROCAROIA therapy, has been reported twice in the extensive world literature.

HOW SUPPLIED: Each orange, soft gelatin PROCAROIA CAPSULE contains 10 mg of nifedipine. PROCARDIA CAPSULES are supplied in bottles of 100 (NOC 0069-2600-66), 300 (NOC 0069-2600-72) and unit dose (10x10) (NDC 0069-2600-41). The capsules should be protected from light and moisture and stored at controlled room temperature 59° to 77°F (15° to 25°C) in the manufacturer's original container.

More detailed professional information available on request

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"I can do things that I couldn't do for 3 yrs. including joining the human race again."



Quotes from an unsolicited letter received by Pfizer from an angina patient. While this patient's experience is representative of many unsolicited comments received, not all patients will respond to Procardia nor will they all respond to the same degree.

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"My daily routine consisted of sitting in my chair trying to stay alive."

"My doctor switched me to PROCARDIA[*] *as soon as it became available. The change in my condition is remarkable."*

"I shop, cook and can plant flowers again."

"I have been able to do volunteer work...and feel needed and useful once again."

PROCARDIA can mean the return to a more normal life for your patients—having fewer anginal attacks,[1] taking fewer nitroglycerin tablets,[2] doing more, and being more productive once again.

Side effects are usually mild (most frequently reported are dizziness or lightheadedness, peripheral edema, nausea, weakness, headache and flushing, each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%).



for the varied faces of angina

PROCARDIA®
(NIFEDIPINE) *Capsules 10 mg*

*Procardia is indicated for the management of:
1) Confirmed vasospastic angina.
2) Angina where the clinical presentation suggests a possible vasospastic component.
3) Chronic stable angina without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or nitrates or who cannot tolerate these agents. In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks' duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.

Please see PROCARDIA *brief summary on adjoining page*

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Postgraduate Page

NOVEMBER

2 Advances in Pediatric Oncology, Bingham Child Guidance Clinic Conference Room, Louisville

4-5 Bethesda Hospital and Deaconess Association, Cincinnati Cancer Conference: G. I. Malignancies, The Westin Hotel, Cincinnati, OH

4-5 American Rheumatism Association, Central Region Meeting, Knickerbocker Hotel, Chicago, Illinois

4-5 Virginia Lung Association, Quillen-Dishner College of Medicine, Asthma, Martha Washington Inn, Abingdon, Virginia

6-9 Southern Medical Association, Regional Postgraduate Conferences, Baltimore, Maryland

6-9 Southern Medical Association, Annual Scientific Assembly, Baltimore, Maryland

9 The Management of Stress, Quillen-Dishner College of Medicine, Bristol, Tennessee

16 A Family Therapy Seminar, East Tennessee State University, Johnson City, Tennessee

17-19 The Seventeenth Symposium on Philosophy and Medicine, Mercer University, Macon, Georgia.

DECEMBER

7 Psychological Significance of Eye Contact, Bingham Child Guidance Clinic, Conference Room, Louisville

10-14 Departments of Otolaryngology & Pediatrics, University of Pittsburgh School of Medicine, The Tenth Annual Symposium, Ear, Nose and Throat Diseases in Children: A 1983 Update "Including the most recent results of the Pittsburgh and Boston studies of ear and sinus disease and tonsillectomy and adenoidectomy", The Breakers, Palm Beach, Florida

16-17 Peripheral Vascular Disease Symposium, Hyatt Regency Hotel, Lexington, Kentucky

JANUARY

4 The Asthmatic Child, Bingham Child Guidance Clinic, Conference Room, Louisville

7-17 "Medical Updates V: A Review of Recent Advances in Medicine," Office of Continuing Medical Education, Quillen-Dishner College of Medicine, Location: Vail, Colorado

FEBRUARY

1 Reading Disabilities, Bingham Child Guidance Clinic, Conference Room, Louisville

6-8 An NIH Concensus Development Conference of Use of Diagnostic Ultrasound Imaging in Pregnancy, National Institute of Health, Bethesda, Maryland

19-24 Fifteenth Family Medicine Review, Hyatt Regency Hotel, Lexington, Kentucky

MARCH

9-11 Advance Cardiac Life Support Courses, University of Kentucky Medical Center, Lexington, Kentucky

14-16 10th Annual Symposium on Psychopharmacology, Seelbach Hotel, Louisville, Kentucky

3/26-4/6 Clinical Cytopathology for Pathologists, 1984 Postgraduate Course, The John Hopkins University School of Medicine, Baltimore, Maryland

28 The Natural History of Mental Retardation, Bingham Child Guidance Center Conference Room, Louisville, Kentucky

APRIL

4 Residual Attention Deficit Disorders, Bingham Child Guidance Center, Conference Room, Louisville, Kentucky

25-28 10th Annual Postgraduate Course in High Risk Pregnancy, Hyatt Regency, Louisville, Kentucky

A WORD TO THE WHYS

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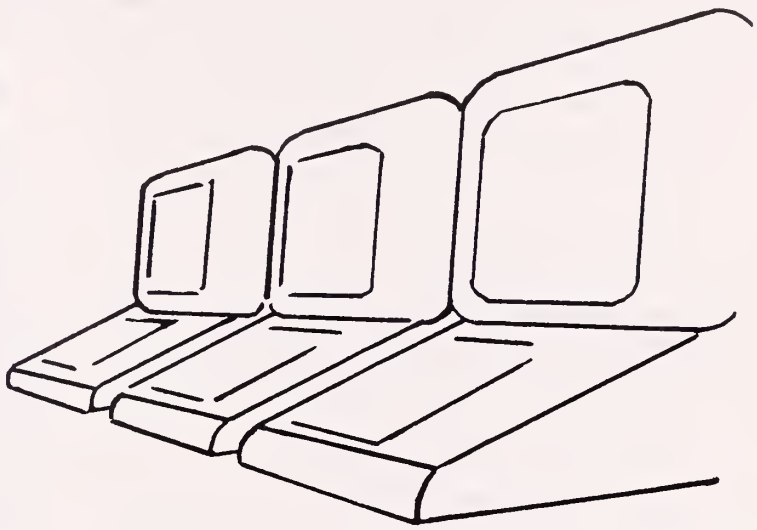
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PRACTICE MANAGEMENT



Maximizing Your Computer System

Once your office staff has installed a computer system, the planning and utilization of your system has just begun. Although initially you had given considerable thought to applications you wanted your computer to provide, you will soon find that there is a wealth of information available to you to take advantage of. There are a variety of things that you must continue to review to insure that you maximize your system's capabilities to obtain the most for your investment.

Following is a list of items and tips that you might want to consider in the management and utilization of your system.

1. To avoid electrical problems, invest in a designated electric line that is not directly tied to any other heavy equipment in your office. This one process alone will save you numerous headaches. A voltage surge, even one that is totally unnoticeable to the human eye (*eg* a dimming light), is sufficient to erase or rearrange thousands of characters of information. Even if you have a designated line you may still have surges caused by the local power company. Therefore, you may be well served to invest in a surge control module that filters out these power spikes. However, this last alternative should be considered only if the problem becomes excessive.
2. Leave the power on to your system 24 hours a day. This will save you down time because a constant energy flow through the processor and memory is the best way to maintain the system. If you have hard disk drives it is not necessary to leave them running, but only the processor and memory. The processor and memory, in its idle state (nonuse), does not utilize much current, and this small investment will help maximize your up time. Powering up and down the computer places additional stress on the circuits and reduces the life of your system.
3. **Controlling static.** Depending on the location of your system, you may or may not have static problems. A single static charge is sufficient to wipe out thousands of characters of information.

Most systems have a static filter through which any communication between the computer and the terminal must travel. Although a static filter will help prevent charges from reaching the processor, and subsequently the storage area, it may inadvertently change the information currently on the screen. However, a quick correction of information on the screen before the document is filed will rectify this problem. Care should be taken with static around the main computer system. A static charge directly discharged into the main frame can cause media corruption. An antistatic mat should be placed under the system, or if located on carpet, an antistatic spray should be applied. An inexpensive solution to spray on the carpet to control static can be made from one part fabric softener to 10 parts water. Remember to respray after vacuuming.

4. **System environment.** Environmental considerations around the computer are not as critical as they were in the past because temperature ranges can now go from very high to very low, with a similar situation for the humidity. It is not as critical at what temperature your system is maintained, but that it is a constant temperature. If the manufacturer says that the maximum temperature of the operating system is 90 degrees, then it is important to remember that this is the internal temperature of the computer. The internal temperature is usually 10 degrees higher than the external temperature. Therefore, when setting the climate control in the room, you must take into consideration that the computer is running hotter than anticipated. The more spacious the room, the easier it is to maintain. Also remember that any form of circulation will help reduce the air temperature by as much as five degrees. Therefore, a ceiling fan or portable fan can be used in keeping the temperature in range. Should you have a humidity problem, then it may be necessary to install a humidifier or dehumidifier depending on your needs. Unless your office is located in a basement, or you are employing a large main frame system (*eg* large clinic) that requires an environmental control system, the humidity should not be a problem.

 Another important item to consider in the placement of your computer is the level of dust that the system will be exposed to. Unless you have a sealed disk drive system, you will always be in danger of having dust particles settle on the media and cause problems. Your system should be located away from dusty areas as well as all media, whether it be floppy diskettes, tapes, or removable disk packs. Floppy diskettes and tapes can usually be cleaned easily by blowing air across them to remove dust particles. They are not as sensitive to dust and dirt as are the hard disk packs. The removable disk packs, because of the speed at which they spin, can be easily disrupted by dust particles. The common dust particle is larger than a micron, the clearance between the read write head (the device that floats over the surface area, reading information) and the media surface. Although the computer contains filters, or sweepers for the disk packs, it is important to periodically have the packs cleaned and have routine maintenance done on your disk drives. Therefore, there should be no smoking in the immediate vicinity of the system, as the filtration system may not screen out all the particles, and smoke particles are sticky and quickly adhere to the media. These simple precautions will insure your system will not crash (break down) and require extensive down-time for repairs. A routine maintenance contract with the manufacturer will insure that this problem does not occur.

5. **Record storage.** Media utilized for storage of data should be kept in a fireproof container that has a high tolerance to heat. Certain media, such as tapes, floppy diskettes, and even the hard disk packs, are susceptible to heat corruption as low as 150 degrees. It may not be economical to install a fireproof safe designed for computer needs, as they are usually a lot more expensive than the standard fireproof safe. The best opportunity available would be the storage of that media off site.

6. **Equipment care.** The video terminals and printers are like any other finely tuned piece of equipment in that they must be kept clean to operate properly. If you are utilizing terminals with detachable keyboards, you may easily keep dust out of the keys by turning the keyboard off when not in use. A small investment to obtain a dust cover is the best approach. Your printer should

also be covered when not in use and in some cases a soundproof cover may be added to reduce noise. A printer becomes dirty quickly because of the fine paper dust that is present on the continuous feed and collects on the printer. It will be necessary to clean the interior of your printer regularly with a vacuum cleaner.

7. **Managing your data base.** The quickest way to slow down the speed of your system is to mismanage your data base and fill your system with unnecessary files. The more files that are maintained on your system the slower it will go. However, many systems contain reorganization programs to re-establish your files and in some cases recompress your data base file, thus making it run at its top efficiency. Files that are not needed daily should be moved off line, but be available for quick transfer back to the system. Also, programs that are used only periodically should be kept off line. The source code for your programs (a programmer's written instructions) should be kept off line and only the executable programs be left on line. Initially, when installing your system, you will probably add all the manufacturer's "help files." These instructional programs will prompt you through the operation of the computer, but because they are lengthy and take up a lot of available storage space, you may wish to remove these utility files after staff has become comfortable with its operation. It is also important to maintain your software on contract with the supplier to insure updates and revisions to your existing programs. This investment is insignificant compared to the benefits it provides.

8. Encourage your staff to be involved in the local or state computer users group. More tips and hints on managing and maximizing a computer system can be learned at these meetings. They are strictly an educational group dedicated to enhancing the knowledge of individuals that use these systems.

9. Subscribe to various computer trade publications, as they provide a wealth of information.

10. Apply the same management of your office resources to the use of your computer. It can handle a lot of information but still has its limitations. Review the jobs to be undertaken by your computer to insure proper handling and use of the programming in a manner to obtain the maximum speed and efficiency of your system.

If you consider your computer as a part of your total office automation, you will realize the system's maximum potential. Constant review of your applications to insure the best benefits of your system will payoff in the long run. A smooth and efficient office will reward you with dedicated and effective staff and a total control of the business and financial aspects of your practice.

This is the ninth in a series of articles by Joe Witherington, Jr., System Manager for KMA and KMIC.

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RU-TUSS® II
sustained release capsules

Before prescribing, see complete prescribing information. The following is a brief summary.

DESCRIPTION: Each sustained release capsule contains 12 mg of Chlorpheniramine Maleate, USP and 75 mg of Phenylpropanolamine Hydrochloride, USP in a base to provide prolonged activity.

INDICATIONS: For the treatment of the symptoms of seasonal and perennial allergic rhinitis and vasomotor rhinitis, including nasal obstruction (congestion).

CONTRAINDICATIONS: Hypersensitivity to any of the components, concurrent MAO inhibitor therapy, severe hypertension, bronchial asthma, coronary artery disease, stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction. Do not use in children under 12 years.

Do not use this drug in patients with narrow-angle glaucoma, obstructive or paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrage, severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis. Do not use in nursing mothers.

Use in treating lower respiratory tract symptoms, including asthma, is contraindicated.

WARNINGS: Caution patients about activities requiring alertness (e.g., operating vehicles or machinery). Antihistamines are more likely to cause dizziness, sedation, and hypotension in elderly patients. Patients should also be warned about the possible additive effects of alcohol and other CNS depressants.

Usage in pregnancy: Safe use in pregnancy has not been established. Use only when the potential benefits have been weighed against the possible hazards to the mother and child. Note that an inhibitory effect on lactation may occur.

PRECAUTIONS: Use with caution in patients with a history of bronchial asthma, increased intraocular pressure, hyperthyroidism, cardiovascular disease, hypertension, hiatal hernia with reflux esophagitis, intestinal atony of the elderly or debilitated intestinal obstruction, myasthenia gravis, renal function impairment, and ulcerative colitis (severe).

Drug Interactions: MAO inhibitors, Alcohol or CNS depressants, especially anesthetics, barbiturates, and narcotics.

ADVERSE REACTIONS: Prolongs the response to nervous stimulation, potentiates the response to norepinephrine, and inhibits the response to tyramine.

Slight to moderate drowsiness occurs relatively infrequently with Chlorpheniramine Maleate. Other possible side effects common in antihistamines in general include perspiration, chills, dryness of mouth, nose and throat.

Cardiovascular System: Hypotension, headache, palpitations, tachycardia, extrasystoles.

Hematologic System: Hemolytic anemia, thrombocytopenia, agranulocytosis.

Nervous System: Sedation, dizziness, disturbed coordination, fatigue, confusion, restlessness, excitation, nervousness, tremor, irritability, insomnia, euphoria, paresthesias, blurred vision, diplopia, vertigo, tinnitus, acute labyrinthitis histeria, neuritis, convulsions.

Gastrointestinal System: Epigastric distress, anorexia, nausea, vomiting, diarrhea, constipation.

Genitourinary System: Urinary frequency, difficult urination, urinary retention, early menses.

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Treatment: The patient should be induced to vomit, even if emesis has occured spontaneously. Vomiting by the administration of ipecac syrup is a preferred method. However, vomiting should not be induced in patients with impaired consciousness. Stimulants (analeptic agents) should not be used. Vasopressors may be used to treat hypotension. Short-acting barbiturates, diazepam or paraldehyde may be administered to control seizures. Hyperpyrexia, especially in children, may require treatment with tepid water sponge baths or a hypothermic blanket. Apnea is treated with ventilatory support.

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Report of the Committee to Investigate Changing Trends in Medicine

The following article is the report of the Committee to Investigate Changing Trends in Medicine which was presented to the House of Delegates at their meeting in September. The KMA Board of Trustees and the House of Delegates considered the report of such importance in providing pertinent information that it was decided to highlight it in this issue. All reports and proceedings of the September House of Delegates meeting will be published in the December Journal of KMA.

The last 50 years have seen major changes in technological advances in medical care delivery. In the past 20 years there have been changes in the way care has been paid for; *ie*, the emergence of the third party, both private and governmental.

Trends indicate other major changes are beginning to take place in which:

- Non-physicians are taking a greater role in determining how medicine will be practiced, how it will be paid for, and how much will be paid for medical care.
- Business coalitions are making concerted efforts to lower corporate costs through negotiations with hospitals and physician groups, and by seeking positions on hospital boards. Private business is contracting for review of their health care costs.
- Legislation passed in California has legalized the corporate practice of medicine.
- The public has indicated a desire to limit what funds it will make available to government, which translates into less money for government employee benefit plans; limits on Medicare/Medicaid and other government funded programs; and the business community is no longer willing and/or able to make up the deficit.
- Interest in self-insurance programs has increased significantly by companies both individually and collectively.
- The public is demanding more cost accountability from providers while the Federal Trade Commission and the court system have established policies that for all practical purposes end fee review.
- Congress has made changes in hospital-based physician reimbursement under Medicare, implemented diagnosis-related groups for Medicare hospital reimbursement, and is studying the feasibility of applying them to physician reimbursement.
- Nonphysician providers are making inroads based on cost considerations. They are selling the idea that they can do a lot of things cheaper than physicians and are claiming that there is no lessening in the quality of care.
- There has been an increase in the number of physicians participating in group practices.
- Most physicians feel there are more than enough practitioners in their communities, but the public does not feel there is an overabundance of doctors.
- Organized medicine has not been effective in dealing with nonmember aberrant physicians for reasons largely beyond its control.
- The increase in the number of physicians has resulted in greater competition for patients and greater competition for exclusive in-hospital contracts. It has also resulted in the establishment of alternate delivery systems such as free-standing

emergency clinics; preferred provider organizations; ambulatory care (primary and surgery) centers; primary care networks and physicians' alliances; and hospital owned clinics for minor injuries and medical problems. There is a growing number of salaried physicians with different values and expectations than self-employed physicians.

- Females now comprise more than one-fourth of the nation's medical school classes. Thus, a significant number of the future membership in organized medicine will be female.
- The population is getting older, but the overall American birth rate has leveled off. The elderly use more care across the board, and thus more funds, while at the same time there will be fewer people in the work force paying taxes to fund governmental medical programs. By the year 2015, the ratio of workers to retire will be 2:1.
- Ethical questions will have to be addressed concerning the prolonging and quality of life versus dollars spent.
- The economy is changing from industrial-based to service-based.
- Hospitals may compete with physicians through closed medical staffs and contracts with employers, unions, and government organizations.
- Hospitals may compete with physicians by employing physician extenders, *eg*, CRNAs.

These issues led the Board of Trustees to appoint our Committee last December and give it the following charge: study and report on evolving delivery and payment mechanisms; study and report on demographic trends affecting medical practice; study and report on ethical questions regarding financial considerations versus quality of life; investigate trends in cost containment activities; and determine to the extent feasible the future role of organized medicine in this changing environment.

Committee members were appointed based on a desire to assemble a group representative of several specific areas concerned with and involved in different trends in medical practice.

The Committee prioritized and addressed four major topics this year: competition in medicine, the emergence of the free-standing clinic, the preferred provider concept, and a study of the practice plans of residents and third and fourth year students at both State medical schools.

Douglas E. Hough, Ph.D., Director of the Department for Health Resource Analysis at the AMA, made a presentation to the Committee on competition in medicine.

While many people generally think of competition only in terms of price, there are several other facets of competition in medicine such as, for example, quality of care, waiting time, and other amenities for patients. Just as in other areas, a large number of sellers and buyers in the market is necessary for competition to occur. A few sellers will control the market, a large number of sellers will generate heavier competition.

Patients must be sensitive to the price of their medical care, or competition will not take place. With more people becoming directly responsible for a larger percentage or their medical bills as a result of changing trends in medical insurance, they are becoming much more sensitive to what price they are being charged. The constant rapid rise in health costs and the increasing number of physicians entering practice is resulting in increased competition among physicians for the "buyers" of their services.

One of the results of that increase in competition is that the nature of practice opportunities is changing. Physicians are now more likely to accept salaried positions when they enter practice. Group practice is increasing while the number of solo practices are declining. (Our own survey of residents and third and fourth year medical students at U of L and U of K indicated that none of the respondents intend to go into solo practice.) Doctor Hough felt that experiments with delivery mechanisms will increase significantly in the next few years. Competition is resulting in changes in reimbursement from fee-for-service to prospective reimbursement. There is also a trend toward decreased specialization. The generalist will do more specialized work and the specialist will do more general work.

Those that may be affected most by competition are the young physicians just beginning practice and older physicians. Younger physicians are having a much harder time establishing practices due to the large number of doctors who have entered the market in the last 10 years. In addition, it is more difficult today to obtain loan money to set up new practices. Older physicians are faced with increasing changes in health care delivery methods and simply may not want, or be prepared, to deal with those changes.

Doctor Hough illustrated the results of a quarterly survey through the AMA's Socioeconomic Monitoring System. Physicians from across the country were sur-

veyed on changes that have occurred between 1970 and 1982 with regard to fees, visits, and income.

It was found that while physicians' nominal income grew since 1970, real income declined slightly as a result of inflation. However, deferred income was not considered and may alter these results significantly. Practice expenses are increasing more rapidly than physicians' incomes. While net income increased by 8.7%, expenses increased by 11.8% in the period surveyed. Malpractice claims are increasing at double the rate of five years ago, from 3.2% to 6.7%.

The average medical school debt for a doctor out of school for two years is $20,200. This, along with the difficulty of establishing a new practice, has made salaried positions much more attractive to new physicians. In 1969, 22% of all physicians were in group practice; in 1980, 38% were in group practice.

Ninety percent of the doctors surveyed felt that the staff at their hospital was sufficient, with 17.4% reporting that at least one segment of their staff was closed to new doctors.

Because of increased involvement by hospitals in ambulatory care, 18% of respondents considered the hospital to which they admitted patients a competitor. Of all ambulatory surgery, 54.5% is performed in hospitals; 3.4% in ambulatory surgery centers; and 37.7% in doctors' offices. The movement seems to be toward ambulatory surgery in the physician's office.

The survey showed that doctors are becoming much more aware of marketing techniques and are beginning to market themselves. Many doctors are becoming involved in some marketing strategies, particularly younger physicians.

Our second area of study concerned the recent emergence of the "free-standing clinic."

For the purpose of this report, free-standing clinics will include both free-standing emergency clinics (FECs) and free-standing primary care clinics.

Nationwide, there are currently some 700 such clinics in operation with projections of 1,200 by the end of 1983. The National Association of Free-standing Emergency Centers estimates current patient volume at 12 million patients per year with $500,000,000 in annual revenue. Of interest, the current total annual expenditure in outpatient care in the U.S. (physicians' offices and hospital emergency rooms) is approximately $25 billion.

Currently, Humana operates 60 clinics under the name MedFirst. Humana expressed great interest in this concept several months ago and initiated a program to develop 500-600 such clinics. Most of their existing clinics were purchased rather than built and are located primarily in cities where Humana does not own hospitals. Recent information would suggest that their experience has been less profitable than initially anticipated, and it is doubtful that they will develop their clinics beyond a total of about 100.

The average start up cost for these clinics is $400-$500,000 with monthly overhead of $25-$35,000. At current charges, the facility must see 40 to 50 patients per day to be profitable. Staffing and hours of operation vary widely, and the majority offer extended hours, but have less than 24-hour service.

There remains considerable controversy over free-standing emergency clinics; but thus far little regulatory legislation has been enacted, although several states are currently considering such legislation. The AMA has not taken a position as favoring or opposing these clinics, but has suggested guidelines for those clinics describing themselves as emergency clinics. As a result, the National Association of Free-standing Emergency Clinics has filed a complaint with the Federal Trade Commission against the AMA. There are both advantages and disadvantages to this new dimension in health care delivery.

The following are some stated advantages of free-standing clinics:

1. Extended hours.
2. Convenient location.
3. More rapid service.
4. Walk-in service without appointment.
5. Less expensive than hospital emergency rooms.
6. Increased quality of care by attracting the 30-35% of the population that does not have a primary care physician as well as those patients fearful of hospital emergency rooms.
7. May force primary care physicians to extend their hours, spend more time with patients, and generally provide a higher quality of care because of competition.
8. Competition for minor emergency patients may force closure of some hospital emergency rooms, thus lowering overall health care costs.

Opponents of free-standing clinics offer the following disadvantages to these centers:

1. Lack of continuity of care.
2. May mislead patients by implying that they can handle major emergencies, thus delaying defin-

itive care.
3. More expensive than primary physician office care.
4. Some advertising has been misleading, especially regarding third party coverage.
5. Some third party payors do give unfair advantage in reimbursement policies to free-standing clinics.
6. May force closure of some hospital emergency rooms.
7. With less than 24 hour coverage, patients may have no physician to call during hours facility is closed.
8. Hospital-owned clinics may cover initial losses by increasing inpatient charges.
9. "Profit motive" may overshadow "quality care motive."
10. Clinic availability may discourage patients without a primary physician from obtaining one.
11. Duplication of lab work in patients needing admission.
12. Most require up front payment and do not accept Medicare/Medicaid payments.
13. Force an increase in hospital emergency room charges due to fewer patients among whom to spread fixed costs.

The bottom line is far from written in the area of free-standing clinics. Not all clinics have succeeded, and in fact, many have already closed. It remains uncertain as to what share of the "market" they can grasp and likewise uncertain as to who will be hurt most—the primary physician or hospitals.

The Committee also discussed the various ways in which U.S. corporations are currently involved and hope to be involved in the delivery of health care in this country, especially as pertaining to the trends of the most recent several years.

The primary and possibly the only reason for such extensive corporate interest in medical care delivery is the rise in health care costs over the past several years. In 1982, the total health care bill of the United States was $321 billion, representing 10.5% of the gross national product. This contrasted with approximately 4.5% of the gross national product 10 to 15 years ago. Corporate health costs were just over $100 billion in 1982, representing approximately $1,000 per employee, and representing 35-40% of the total U.S. health care expenditure. For example, last year General Motors spent $1.7 billion, Ford Motor Company $760 million, and AT&T $1 billion on employee health benefits.

Corporations are eager to lower these health care costs, but the degree of concern does vary greatly from corporation to corporation. Nationwide, the total employee benefit package averages 30 to 40% of the total compensation of the employee. Health care costs represent only a small segment of these benefits, which include such things as vacation, life insurance, and retirement plans. Life and health insurance average 5 to 6% of the total compensation package, with vacation and retirement plans making up the other 34 to 35% of the total benefit package.

A recent study conducted by MIT with a Robert Wood Johnson Foundation grant surveyed 69 major companies representing 6 million employees, or a total of greater than 12 million insured persons. They found that employees value their health care benefits most highly of all benefits and are, therefore, most reluctant to consider reductions in the health care benefit package or to consider co-pay arrangements. Although seemingly unmotivated to become involved in these issues in the past, there is a definite trend toward business participation in efforts to establish control of costs, as evidenced by many business coalitions nationally and at least two medicine-business coalitions in Kentucky.

Many solutions are being considered by corporations in an effort to reduce rising health care costs. As of April 1982 a total of 261 health maintenance organizations were operational across the nation, serving just over 11 million people and located primarily in cities with greater than 200,000 population. Of the total, approximately one-third are individual practice associations (IPAs); approximately 10% are Blue Cross and Blue Shield sponsored plans; and the remainder are either independent or owned and operated by national firms. The Kaiser plan remains the major HMO, representing some 75% of the nationally owned plans. Companies reluctant to encourage HMO's enrollment cite the perception of a lower quality of health care, lack of out-of-area coverage, financial instability, government involvement, and lack of freedom of choice of physicians as problem areas.

Generally, IPAs seem to be able to compete favorably with HMOs despite less evidence of cost reduction. Companies see advantages in the preferred provider organization (PPO) concept, but point out that simply discounting fees, which many but not all PPOs do, will be inadequate to reduce cost since this can be readily overcome by providing more care and more

tests. Corporations appropriately focus on utilization review as being important in the overall health care cost problem. Corporations are becoming more interested in the specific portions of health care costs and not just in the total bill. Several business/medicine coalitions are attempting to collect data regarding physicians fees, laboratory fees, and hospital costs, usually with the idea of publishing it for public use.

The R. J. Reynolds Company formed its own HMO in 1976, and the John Deere Company also has its own HMO. These examples represent direct participation by corporations in the delivery of health care. According to *American Medical News* reports, these companies and their employees are happy with these arrangements and claim considerable savings. Reported savings include reports of reduction in total hospital days by as much as 50%. The Gillette Company has hired part-time physicians to provide primary care to employees rather than encourage the use of primary care physicians in the community. Most companies do have medical departments, but some are apparently attempting to establish comprehensive medical care departments rather than have physicians available only for treating minor ailments and injuries.

Companies are making attempts at employee education regarding appropriate use of health care. There is little data available on the effectiveness of these programs. They center on lifestyle modification such as proper exercise; nutrition; stress management; detection and treatment of hypertension; and reduction in tobacco, alcohol, and drug use.

There is a growing trend for hospitals to look into the feasibility of "owning" medical practices in an effort to increase bed utilization. However, physician and staff opposition have hindered the aggressive pursuit of this concept. One of the original hospital owned medical practices is in Springfield, Massachusetts at the 311 bed Mercy Hospital. A need for primary care physicians in the community resulted in the establishment of a seven person hospital practice which represents 15 to 20% of the hospital's total admissions. A similar situation is in Albuquerque, New Mexico where there are six satellite practices (primary care centers) with 112 salaried physicians. Hospitals have not yet determined a way to become more directly involved in managing the medical staff in a way that is acceptable to their regular private physician staff. Most hospitals apparently favor hospital ownership of office buildings, offering low rent or no rent to their physicians as the best approach to maintain bed utilization.

The Humana Corporation has recently developed plans for a health insurance program, initially for its own employees, but ultimately to be offered to the public. In 1982 health insurance increased in cost 35% for Humana employees. Humana leadership noted that Healthcare of Louisville had less than $50.00 increase in employee cost for 1982, and this led to a large number of Humana employees joining Healthcare of Louisville and, in fact, receiving their hospital care in non-Humana hospitals.

The plan will be open not only to Humana employees, but to the public, especially to larger industries where Humana would offer to accept the companies current expenditures for health care and add a fixed amount each year (cost of living increase). Humana would then assume the risk of rising costs, with this being offset by their not having empty beds and unused facilities.

Corporate involvement in health care delivery has sharply increased, and this increase would appear to be entirely related to rising health care costs. This could certainly be said for the other changing trends in medical care in many instances. The overall climate appears to have changed from a quiet resignation to aggressive shopping for lower cost-efficient quality health care by corporations.

The plan which Humana hopes to implement by September 1, 1983, is in effect a PPO but will probably require HMO designation rather than an insurance service designation. This is because patients will be required to use Humana hospitals for their hospitalization or otherwise encounter a co-payment. The plan would offer freedom of choice of physicians, but obviously physicians on Humana hospital medical staffs will be the most sought after since patients will have a co-payment if hospitalized in a non-Humana hospital. They will have utilization review, but the formula has not yet been determined. Initially, at least, there will be minimal or no control on rate and the utilization by physicians, but one must wonder where this may lead over the next several years with physicians becoming more dependent on Humana hospitals. Humana hopes all physicians on the hospital staff will participate rather than Humana selecting physicians through contractural agreements.

The Committee also heard an indepth report on preferred provider organizations (PPOs) which is one of the faster evolving concepts in health care delivery.

A good working definition of a PPO in its most basic form is a group of health care providers (professional and/or institutional) who agree to provide services to a specific pool of patients (usually employment-based groups) at an agreed upon fee-for-service discount rate. The patient retains free choice of providers but is given an economic incentive (often first-dollar coverage) to utilize member providers. The system has built-in incentives for the provider (a pool of patients, fee-for-service, rapid claims turnaround) and payor (negotiated discounts) as well.

Because there are so many variations of the PPO concept, it is almost impossible to develop a precise definition that would encompass all such organizations. In addition, since the concept is evolving so rapidly it is, therefore, flexible and changes slightly almost daily.

Organizational forces for the establishment of PPOs usually originate from one of three areas: hospitals, physician groups, or insurance companies. It was reported that Mutual of Omaha will, on request, help organizations establish PPOs.

There are various reasons for setting up PPOs, most of which come back to the cost issue. PPOs will help protect a patient base in a competitive environment. Today's mobile society results in many people finding it difficult to locate physicians who accept new patients. There is an increasing inability on the part of professional organizations to discipline member and nonmember physicians which is a result of court rulings and Federal Trade Commission threats which have had a negative effect on quality review mechanisms.

The security of having some ability to predict health costs is attractive to many businesses, while physicians and hospitals may feel secure in having a specific patient population. Economic incentives can be built in for all parties concerned; however, most are directed to the employer for ease of marketing. PPOs are easy to establish and have low start up costs because people operate out of existing facilities and are often reimbursed through existing mechanisms.

A report on the Physician's Alliance for Medical Excellence, a preferred provider organization in Lexington, Kentucky, was given to the Committee.

Several physicians in the area had expressed a growing concern with the proscriptions of peer review in the area, and that was the impetus for establishing the Alliance. Physician members of the Alliance were carefully screened and made a contractual commitment to abide by the organization's bylaws and to obtain a certain amount of continuing medical education. Each member has agreed to voluntary fee review and arbitration. In addition, members must agree to certain regulations. One example was if the group agreed to freeze fees for a period of time, each member would have to do so or leave the organization.

The Alliance is set up on a fee-for-service basis and is not a capitation program. The reported advantage of the Alliance is that physicians control the program. If the fees of any member get outside the profiles established, the member can be dismissed. The Alliance is a newly formed group, and its impact in the community has not yet been assessed.

Our other area of study this year was to examine the goals and plans of future practitioners—the residents and medical students. A poll was taken of residents and third and fourth year medical students at both Kentucky medical schools. We received a 37% response from UK residents, a 43% response from fourth year UK students, and a 55% response from third year UK students. From UL, we had a 22% response from residents; a 50% response from fourth year students and 27% response from third year students.

The survey showed that many residents ready to enter practice have not fully decided on a practice location. Although 95% of the respondents indicate a preference for private practice, none indicated plans to enter a solo practice. All respondents indicated a preference for a group or partnership arrangement.

Nationally, females comprise 32% of medical school classes. Our survey indicated that females have a tendency to choose primary care specialities such as family practice, pediatrics, and psychiatry, which is consistent with national norms. Only four of the 99 females responding to the survey indicated a desire to work part-time after entering practice.

Of the total residents responding, 162 indicated a desire to enter primary care while 81 will enter non-primary care specialties. Fourth year students mirrored that finding with 86 of the respondents planning primary care careers and 41 indicating a preference for non-primary care practice.

An area of concern noted by the Committee is the lack of membership in KMA by the 31 to 40-year-old age group. Forty-eight percent of the physicians in Kentucky in that age group are non-KMA members. These are physicians in residencies or just beginning practice who presumably would most likely face the competitive medical market yet are the least prepared to deal with it. For that reason, they are prime can-

didates for offers of salaried positions with non-physician owned corporations, free from the worries of the business side of practice, but which may gradually make them dependent on the corporation for which they work. As the corporation assumes more control over an individual's livelihood, physician independence will likely erode; and quality of care may become secondary to corporate profit.

While the Committee has no specific recommendations, we can summarize some of the more pertinent aspects of our discussions this year.

Cost is the single biggest challenge confronting physicians today and is the single most important reason for the rapid movement toward non-physician involvement in medical payment issues.

The profession has lost much of its ability to discipline its own peers; and unless some measure of authority is restored, professional organizations, and therefore the profession itself, will become increasingly fragmented and weak.

The corporate practice of medicine is here and will probably get stronger as larger numbers of physicians come into practice only to find very limited opportunities. As an example, from 1976 to 1981, the U.S. population increased 5.4% while the physician population increased 18.5%. Kentucky alone licenses 500 to 600 new doctors each year. Obviously, all do not stay in Kentucky, but the number is still significant.

Patients and employers are cost conscious today, and there is a growing trend to make individuals even more aware of the costs of medical services.

One thing seems clear. The profession needs to stand together today more than ever. County medical societies, KMA, and the AMA will remain effective as long as we have a unity of purpose and represent a significant percentage of physicians in Kentucky. That collective influence is our only hope of maintaining the privilege of independence we've enjoyed as a profession.

I am grateful for the time and effort the Committee members have given this year; and I particularly appreciate the efforts of Doctor Joan E. Rider, Doctor Allen E. Grimes, Jr., Doctor Robert R. Goodin, and Douglas E. Hough, Ph.D., of the AMA, for the excellent reports they developed and presented to the Committee.

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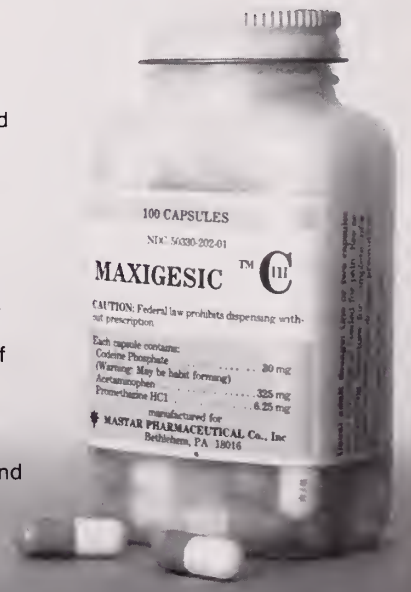
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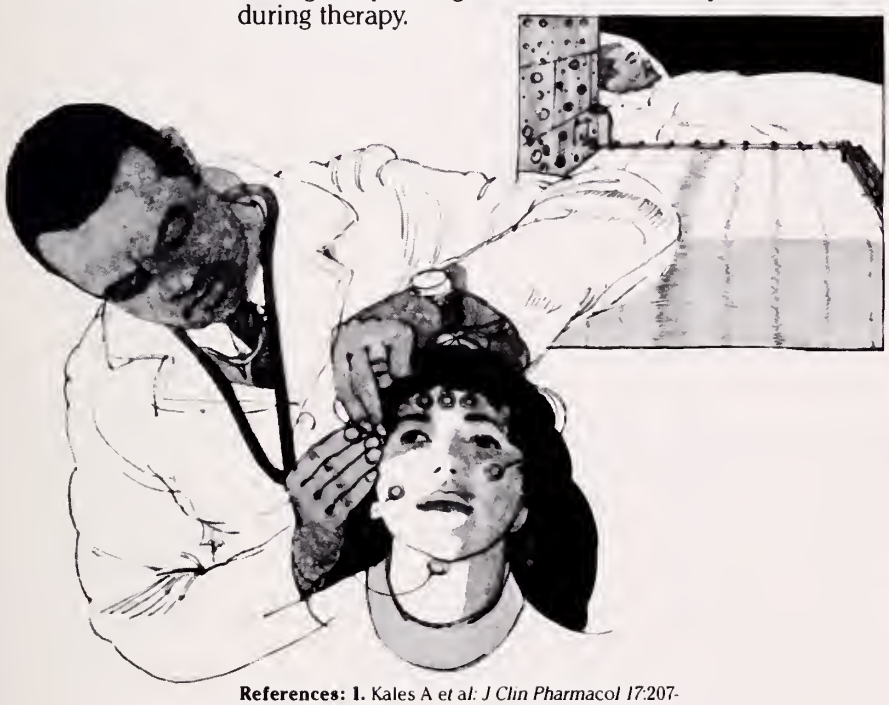
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References: 1. Kales A *et al: J Clin Pharmacol 17*:207-213, Apr 1977 and data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Kales A: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **4.** Kales A *et al: JAMA 241*:1692-1695, Apr 20, 1979. **5.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 15, 1978. **6.** Kales A *et al: Clin Pharmacol Ther 19*:576-583, May 1976. **7.** Kales A, Kales JD: *Pharmacol Physicians 4*:1-6, Sep 1970. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Dement WC *et al: Behav Med 5*:25-31, Oct 1978. **10.** Vogel GW: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **11.** Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington, DC, May 3-7, 1971. **12.** Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytime sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. **13.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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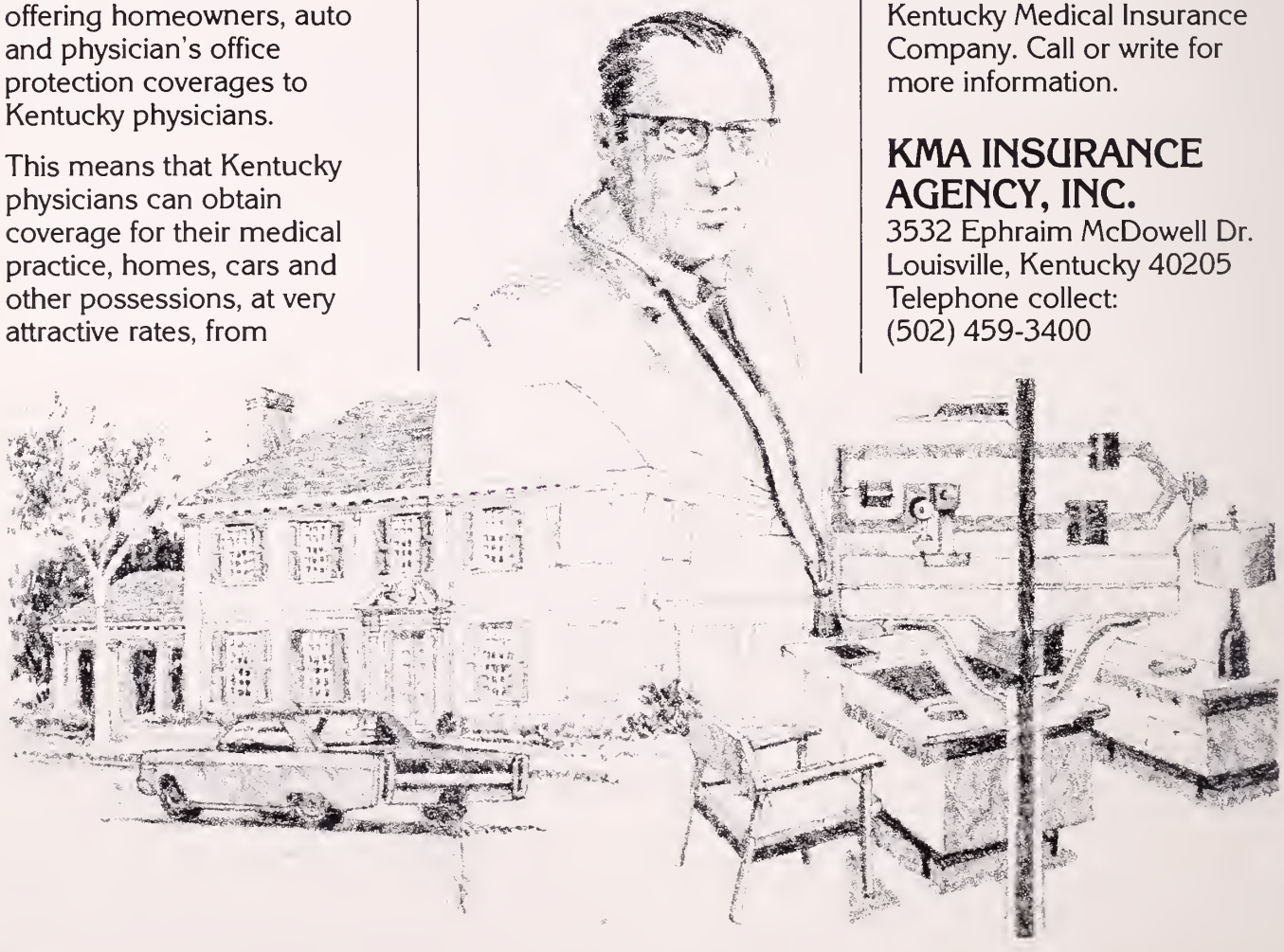
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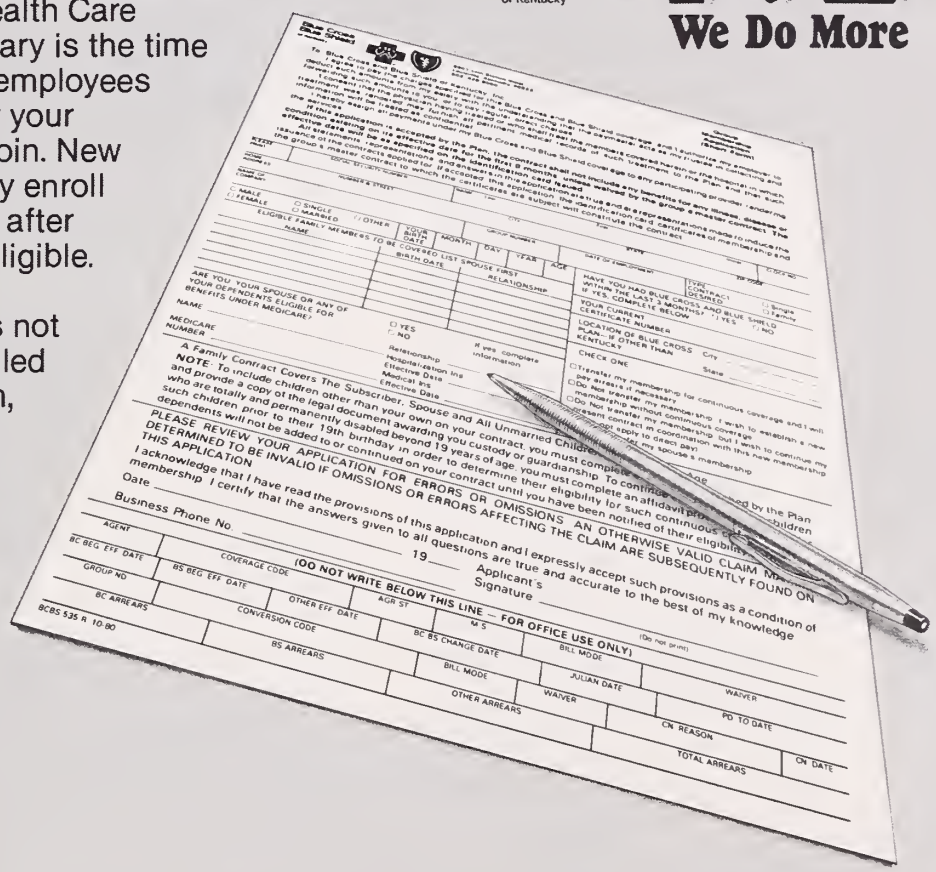
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PRESIDENT'S PAGE



It seems to me that this page continues to be full of exhortations for members of the Kentucky Medical Association to do things to protect our professional environment as we know it, to strive harder to combat the bureaucracy creeping socialists. Here in December, at the end of the year, and the approach of the Christmas season, perhaps we could turn our thoughts to something more pleasant. December, with the summing up of the years work, the rest and relaxation around the yuletide period, the joining together of families which are often separated because of school and jobs, is perhaps one of the finest parts of the year. As physicians of this state, I'm sure that we can all look back in a year of hard work and which enumerable people have been benefited by the efforts we have made. I don't suppose it would be well to print this outside of a professional journal, but there are few, if any, professions that can look at their year's work and have it mean as much as ours does in the suffering relieved, the lives saved, and the actual good that we have done to society as a whole. Self congratulations can certainly lead to complacency, arrogance, and other unpleasant things, but I certainly feel that we can each be proud of what we have done in the past year.

I know that when I look at what the office staff has accomplished for the group in which I am privileged to work, I cannot help but be amazed. The dedication and efficiency at which they go about it is probably mirrored in all of our offices across this state. The same can certainly be said for the staff of the Kentucky Medical Association who have given us a year of unparalleled work, diligence, and achievement. Every doctor in Kentucky can point with pride to what his organization has done for him in the past year in meeting our adversaries in the bureaucratic world, in improving the climate for medical liability insurance in this state, and for the institution of the Federal Credit Union in our name.

One hopes that everyone of you will find time to be more with your family and loved ones in the month of December, take a few days well earned rest from the orders and responsibilities which affect us all twenty-four hours a day. I hope you all get a few days extra in Florida, Hawaii, or a few days more in the shooting blinds, or a few more basketball games under your belts.

My wife Katherine joins me in wishing each of you a very warm holiday season and best wishes for the New Year whose problems we shall have to attack with renewed vigor. The legislature begins in January. I hope that our esteemed chairman of the Legislative Committee, Dr. Carl Cooper will address you in this space next month to give you some briefing of what we may expect then.

A final note; at the time of this writing I have just completed a very frank session with the Board of the Kentucky Peer Review Organization. This meeting was attended by all of the officers of your Association. We very clearly made known your wishes as put forth in resolution M and Q. Of course we can not dictate to the KPRO Board what they must do, but I am hoping they will have some relief from the present burdensome and onerous preadmission authorization, at least from the Medicare patient.

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Lipoid Pneumonia

W. P. MAYO, M.D., G. L. FOSTER, M.D. and C. L. JERNIGAN, B.A.

Lipoid pneumonia, first believed to occur only in aged or debilitated patients, has also been observed in apparently healthy individuals. Because of common usage, mineral oil is unquestionably responsible for most cases of lipoid pneumonia. Due to its great similarity to lung cancer and to its relatively rare appearance, lipoid granuloma of the lung presents a serious diagnostic challenge. One of our four patients with extreme bilateral aspiration pneumonia had severe impairment of the gas-exchange function of the lungs relieved by prednisone therapy.

Even though mineral oil has been used for medicinal purposes since 1869, the injurious effect of oily substances on the lung was not immediately recognized.[1] Guiesse-Pellessier in 1920 directed attention to the importance of oil aspiration, having shown its effect on animals.[2] However, not until five years later did Laughlin while working at the Hospital for Sick Children, Toronto, observe and report the first cases of lipoid pneumonia.[3] At first it was thought that lipoid pneumonia occurred only with chronic or disabling ailments; however, it is now known that apparently healthy individuals are also susceptible.[1]

The disease is apparently caused by the habitual use of mineral oil or oil-containing nose drops with inadvertent aspiration of some of this material through the glottis and into the lungs.[5] Quinn has shown that iodinated oil placed in the noses of healthy, sleeping subjects could be detected radiologically in the lungs the following morning.[6] Because mineral oil is bland and well tolerated by the trachea, aspiration is usally not discovered until after it has been used for many years.[7] Even though mineral oil is well tolerated by the trachea, eliciting little or no cough, it is especially dangerous since the streaming of mucus on the cilia is disrupted by the oil, and so clearance of the mineral oil is impaired, permitting it to settle with gravity into the dependent lung. Most of the aspirated mineral oil is eventually expectorated, but any remaining in the lung, even though chemically inert, will ultimately cause fibrosis.[8] The reaction to this exogenous oil is characterized by alveolar infiltration with fat-laden macrophages, granulomatous reaction with foreign body giant cells, necrosis and intense fibrosis.[5]

Two features have been described as distinctive for lipoid pneumonia: (1) the presence of oil-containing macrophages in the sputum or on bronchial washing and (2) a "spun glass" appearance to the radiologic density.[9,10,11]

Diagnosis

Symptoms may be entirely absent or may include cough, thoracic pain, dyspnea, and hemoptysis which are so common to a great variety of pulmonary disorders. Physical findings are in no way helpful in establishing an etiological diagnosis. The diagnosis can reasonably be made if the physician is (1) aware of the condition, (2) considers the possibility of aspiration of oily substances, and (3) considers it in his differential diagnosis, particularly if the lesions are multiple and bilateral.[12] A definite history of lipoid aspiration is rarely obtained unless specifically sought. Many of the patients exhibit no signs or symptoms pertaining to pulmonary disease. The diagnosis should be suspected in any patient with clinical and roentgenographic features of chronic unresolving pneumonia or having had a history of frequent bouts of acute pneumonia.

Chest roentgenograms usually show one or more patchy infiltrations or a mass-like consolidation usually in the lower and posterior portions of the lungs. Lipoid pneumonia may also present as a solitary pulmonary nodule. The right lower lobe (particularly the medial and the cardio-diaphragmatic segment) was the most frequent single lobe involvement. Middle lobe involvement was also present in two of our patients and also reported in several other instances. Upper lobe infiltration is evident only in widespread disease.[13] A history of the ingestion or inhalation of oily substances, identification



Fig. 1A: Chest x-ray six months prior to onset of acute symptoms showing no pulmonary infiltrate.



Fig. 1B: Preoperative chest x-ray showing diffuse soft bilateral infiltrate.

of lipid-laden macrophages in sputum, and demonstration of a functional abnormality of the esophagus all strengthen the probability that lipoid pneumonia is present.[14] The diagnosis is infrequently made short of a thoracotomy because the history fails to include questions concerning the use of mineral oil or oil-containing nose drops.[15] Indeed, lipoid pneumonia has often been an incidental finding at autopsy because the clinical signs and symptoms are not characteristic or may be absent and because interpretation of the roentgenograms may be difficult due to the frequently uncharacteristic picture of this condition.[16,17]

Pathology

Lipoid pneumonia consists initially of a hemorrhagic bronchopneumonia, especially if animal fatty acids are the etiologic agent. The normal lung architecture is distorted and obscured by large amounts of lipid in the form of vacuoles of various size and dense fibrous tissue entrapping scattered residual alveoli. Fat stains show globules of oily material within bubblelike spaces in alveoli. Mineral oil taken in large amounts and aspirated over a long period of time will cause a more chronic insidious reaction in the lung with diffuse pulmonary fibrosis and eventually the development of cor pulmonale.[19]

Case Report

This 68-year-old woman complained of shortness of breath of eight months' duration with severe dyspnea at rest two months before our examination. She also reported a weight loss of 12 pounds, a severe productive cough, and had undergone colon resection 13 years previously for cancer without evidence of a recurrent neoplasm. She also had a history of the ingestion of three or more teaspoons of mineral oil per day for five years, plus the sniffing of mentholatum nightly over a period of five years.

Chest x-ray showed a diffuse bilateral interstitial infiltrate which had developed in a period of six months (Fig. 1A & 1B). Lung biopsy was performed and the frozen section interpretation reported as an infiltrating carcinoma; however, the final pathology diagnosis was that of lipoid pneumonia and granulomatosis without evidence of malignancy (Fig. 2).

Microscopic Examination

The entire lung biopsy is submitted and shows no evidence of malignancy. Repeated sections demonstrate a fairly uniform appearance of numerous macrophages and desquamated pneumocytes expelled into the alveolar spaces and some fusiform giant cells. In many areas the alveolar walls are epithelialized and thickened demonstrating fibrosis and there is a severe lymphocytic infiltration within the wall. Many lipid filled macrophages are observed. In focal areas the vessels demonstrate intimal thickening but the vessels for the most part appear patent. In other areas there are focal multinucleated pneumocytes demonstrating oil pooling. Final Diagnosis: Chronic pneumonia consistent with lipoid inhalation.

The patient's preoperative arterial blood gas study showed a pO_2 of 47 mm.; postoperative arterial blood gases one year later showed a pO_2 of 75 mm. Preoperative pulmonary function studies showed a MVV of 43 liters per minute or 58% and a FEV-1 of 56%.



Fig. 1C: Chest x-ray one year following initiation of prednisone therapy showing resolution of bilateral infiltrate.

Postoperative pulmonary function studies one year later showed the MVV to be 94 liters and the FEV-1 86%.

The patient received prednisone, 10 mg., qid initially, lowered to 10 mg., tid, three months later and qod four months later and then to 5 mg. and stopped at the end of one year (Fig. 1C). Twelve months after the cessation of prednisone, the patient had a recurrence of dyspnea and underwent another course of prednisone therapy with good response.

Comment

Since organized lipoid pneumonia may simulate neoplasms both clinically and roentgenologically, the establishment of a diagnosis is essential.[20] Carcinoma of the lung, either primary or metastatic, is often the provisional clincial diagnosis. The manner in which lipoid granuloma may mimic bronchogenic carcinoma is truly amazing, and the diagnosis is not only difficult but at times may be impossible without resort to surgical exploration and direct biopsy of the lesion.[17,18,22] Moreover, atypical histiocytes present in the sputum specimen are sometimes erroneously interpreted as malignant cells.[21] Thoracotomy and frozen section are often indicated to confirm the diagnosis. Even at exploratory thoracotomy, the resemblance to carcinoma is so compelling that lobectomy and even pneumonectomy have been reported with the mistaken notion that a radical operation was necessary. The gross specimen looks and feels like primary cancer. As in our reported case, it is not unusual to have the frozen section report state the presence of malignancy. It is important to remember that lipoid pneumonia occurs in both young and old; when localized, it produces tumor-like lesions.[22]

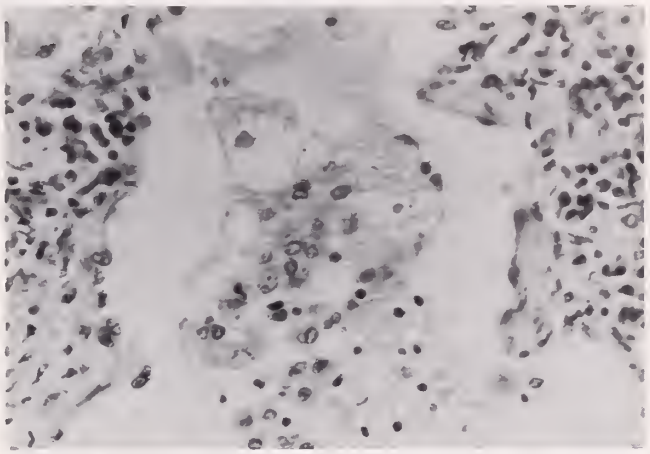


Fig. 2: Microphotography of lung specimen.

Resection is indicated when symptoms are disabling or when malignancy is strongly suspected and a correct diagnosis cannot be made without pathologic identification. Under non-surgical measures, therapy is usually given as discontinuance of the use of oil (usually mineral oil used as a laxative), correction of underlying defects which may favor aspiration, and the use of antibiotics and supportive measures as needed.

Very few reports are available describing the use of corticosteroids to reverse the sclerosing pulmonary lesion and promote the elimination of the aspirated and "fixed oil."[7,8,23,24,25,26] Ayvazian in 1966 reported two patients having lipoid pneumonia treated with prednisone, both of whom experienced clear clinical improvement with considerable resolution of the lesions as seen on roentgenograms.[23] Oldenburger in 1972 reported a patient experiencing lipoid pneumonia from inhalation of burning fats, treated successfully with prednisone.[8] Balakrishnan in 1973 described a two-year-old child having extensive chronic interstitial oil aspiration pneumonia of both lungs and was given corticosteroid therapy for two months with no signs of improvement.[24] Graham[25] and Verhulst[26] likewise reported no reduction in morbidity or mortality in patients having lipoid pneumonia treated with corticosteroids. Hales in 1977 reported that steroid therapy does seem to offer a potentially effective approach in patients having lipoid pneumonia.[7] The experience with steroid therapy is limited and the results variable. We would, therefore, suggest further trials in the diffuse pulmonary disease resulting from aspirated lipid and showing damage to the gas-exchange functions of the lungs.

Acknowledgment

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References **1.** Weissman H: Lipoid pneumonia. *Am Rev Tuberc* 64:572, 1951. **2.** Guiseese-Pellessier H: Rescherches sur l'absorption de l'huile dans de poumon. *Compt rend Soc de biol* 83:809, 1920. **3.** Laughlin GF: Studies of pneumonia following injections of oil. *Am J Path* 1:407, 1925. **4.** Schneider L: Pulmonary hazard of the investigation of mineral oil in the apparently healthy adult. *N Engl J Med* 240:284, 1949. **5.** *Gibbons Surgery of the Chest*. Sabiston DC, Spencer FC. W. B. Saunders Co. 3rd Ed. 1976. Chap 19, p. 536. **6.** Quinn LH, Meyer OO: The relationship of sinusitis and bronchiectasis. *Arch Otolaryngol* 10:152, 1929. **7.** Case Records of the Massachusetts General Hospital. Weekly clinicopathological exercises. Case 19, 1977. *N Engl J Med* 296:1105, 1977. **8.** Oldenburger D, Maurer WJ, Beltaos E, Magnin GE: Inhalation lipoid pneumonia from burning fats. *JAMA* 222:1288, 1972. **9.** Losner S, Volk BW, Slade WR, Nathanson L, Jacobi M: Diagnosis of lipoid pneumonia by examination of the sputum. *Am J Clin Pathol* 20:539, 1950. **10.** Hampton AO, Bickman, CE Jr., Winshipt: Lipoid pneumonia. *Am J Roentgenol* 73:938, 1955. **11.** Tunnel WP, Blade BB: Asynchronous bilateral lipoid pneumonia presenting as solitary nodules in the lung. *J Thorac Cardiovasc Surg* 63:334, 1972. **12.** Buechner HA, Strug LH: Lipoid granuloma of the lung of exogenous origin. *Dis Chest* 29:402, 1956. **13.** Volk BW, Nathanson L, Losner S, Slade WR, Jacobi M: Incidence of lipoid pneumonia in a survey of 309 chronically ill patients. *Am J Med* 10:316, 1951. **14.** *Diseases of the Chest*. Hinshaw, H, Murray JF. W. B. Saunders Co. 4th Ed. 1980. Chap 30, p. 779-780. **15.** *Pulmonary Medicine*. Guenther CA, Ed. J. B. Lippincott Co., 1977. Chap 14, p. 724. **16.** Cannon PR: The problem of lipoid pneumonia. *JAMA* 115:2176, 1940. **17.** Freiman DG, Engelberg H, Merrit M: Oil aspiration (lipoid) pneumonia in adults. *Arch Int Med* 66:33, 1940. **18.** Didolkar MS, Gamaraa MG, Hartman RA, Takita H: Lipoid granuloma of the lung. *J Thorac Cardiovasc Surg* 66:122, 1973. **19.** Fischbein A, Chuang MT, Suzuki Y, Rohl AN: Progressive dyspnea and diffuse pulmonary nodules in a dentist: a diagnostic dilemma. *Mt. Sinai J Med* 45:790, 1978. **20.** Janes RM: Lipoid pneumonia simulating bronchogenic carcinoma. *J Thorac Cardiovasc Surg* 16:451, 1947. **21.** Farber SM, Wood DA, Pharr SL, Pierson B: Significant cytologic findings in non-malignant pulmonary disease. *Dis Chest* 31:1, 1957. **22.** Borrie J, Gwynne J: Parafffinoma of lung: lipoid pneumonia. Thorax 28:214, 1973. **23.** Ayvazian LF, Stewart DS, Merkel CG, Frederick WW: Diffuse lipoid pneumonitis successfully treated with prednisone. *S Am J Med* 43:930, 1967. **24.** Balakrishnan S: Lipoid pneumonia in infants and children in South India. *Br. Med J* 4:329, 1973. **25.** Graham JR: Transactions of the American Clinical and Climatological Association 67:104, 1956. **26.** Verhulst HL, Page LA: *J of New Drugs* 11:47, 1961.

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Local Complications and Mortality of Adult Tracheostomy

MARK SCHUSTERMAN, M.D., RAYMOND A FAIRES, M.D.,

DONALD BROWN, M.D. AND MICHAEL B. FLYNN, M.D.

To determine the rates of mortality and local complications associated with adult tracheostomy, and to determine whether tracheostomy in patients on a head and neck oncology service resulted in complications similar to those in patients undergoing tracheostomy for other reasons, records were reviewed of 214 adult patients who underwent tracheostomy at three University of Louisville affiliated hospitals. Local complications occurred in 26% of those patients. Early local complications occurred three times more frequently than delayed local complications and were due to difficulties with surgical technique and postoperative management. Delayed local complications resulted from prolonged intubation. Tracheal stenosis occurred in 4% of patients and the tracheostomy-related mortality rate was 0.4%. Since our study included a wide range of clinical experience, three patient populations, the use of the Shiley tracheostomy tube in all patients, elective procedures in almost all cases, and the use of horizontal tracheal incisions in most patients, we suggest that the morbidity and mortality figures presented represent currently attainable goals for this procedure. In addition, we feel that the rate of early postoperative local complications can be lowered with improved surgical technique and better postoperative management.

Relief of upper airway obstruction, improved pulmonary toilet, reduction of dead space, and the need to provide a cuffed tracheal tube for long-term mechanical ventilation are the main indications for tracheostomy. In anticipation of postoperative airway obstruction and respiratory complications, tracheostomy is frequently performed on patients undergoing ablative head and neck surgery. This study was carried out to determine the current mortality rate and local complication rate associated with adult tracheostomy in three hospitals affiliated with the University of Louisville. Comparison was made specifically between tracheostomy performed in head and neck surgical patients prior to an elective operation and tracheostomy performed for other reasons.

Materials and Methods

The charts were reviewed of all adult patients undergoing tracheostomy from July 1976 to June 1978 at three University of Louisville affiliated hospitals.

Only local complications related to the tracheostomy site were documented, although many patients in this study had other surgical procedures performed in the same anatomic region. Most of the procedures were performed by junior house officers who were assisted by senior house officers or attending staff. The Shiley tracheostomy tube was used in all patients.

Early local complications were defined as those which occurred within days of the procedure; delayed local complications were defined as those which occurred after several weeks. While this classification was generally satisfactory, occasionally, selection of the appropriate category was arbitrary.

The records of 214 patients were chosen for analysis. The data was documented and analyzed at the University of Louisville Computer Center. Of the approximately 250 patients who underwent tracheostomy, the charts of 36 patients who had undergone tracheostomy immediately prior to laryngectomy and those with insufficient data for analysis were excluded. All patients were followed up for at least one year from the date of tracheostomy.

TABLE 1. Local Complications

Early	No.	Late	No.
Bleeding	14	Tracheal stenosis	9
Tube dislodgement	9	Tracheo-esophageal fistula	2
Cannula obstruction	8	Major artery erosion	1
Subcutaneous emphysema	4	Tracheo-cutaneous fistula	1
Stoma narrowing	2	Late infection	1
Wound infection	2		
Pneumothorax	1		
Improper tube placement	1		
Cord paralysis	1		
Total	42	Total	14

The patients ranged in age from 14 to 84 years; 75% of them were men. One hundred fifty-seven patients were from University Hospital, 27 were from Veterans Administration Medical Center, and 30 were from Norton Hospital.

Results

Local Complications

Local complications occurred in 56 patients (26%). Early local complications occurred three times more frequently than delayed local complications (Table 1). Local complications occurred in 40 patients (25%) at the University Hospital, in nine patients (26%) at the Veterans Administration Hospital, and in nine patients (30%) at the Norton Hospital. Separation of patients into clinical services revealed similar complication rates (Table 2). A higher proportion of early complications occurred on the elective surgery and trauma services (Table 3). Half of the complications occurring on the medical service were delayed.

Tracheal Incision

Documentation of the type of tracheal incision could be found in the operative notes of only 186 patients. A horizontal incision between the tracheal rings was used in 134 patients. Sixteen percent of these patients had local complications; slightly higher rates of local complications were associated with vertical and cruciate incisions (Table 4).

Skin Incision

The type of skin incision had no influence on the incidence of local complications.

Duration of Intubation

Attempts to relate the local complication rate and the proportions of both early and delayed complications to the length of intubation was unsatisfactory because of the small number of patients in each sample group at each time interval. For the first seven days of intubation, an 11% local complication rate occurred; if the tracheostomy tube remained in place for as long as 56 days, the local complication rate rose to 50%.

Mortality

One death directly related to tracheostomy occurred (0.4% mortality rate). While the tracheostomy was a major factor, death was not due to a local complication.

Emergency vs Elective Tracheostomy

Only five patients underwent tracheostomy under emergency circumstances. Tracheostomy was performed on all the other patients as an elective procedure.

Discussion

One purpose of this study was to determine whether tracheostomy in head and neck cancer patients resulted in local complications similar to those in patients undergoing tracheostomy for other reasons. No difference was noted in the total local complication rates when institutions and clinical services within institutions were compared. Early local complications occurred more often in elective surgical and trauma patients, while the medical and head and neck services had a higher proportion of delayed complications. For example, the patients with respiratory or neurological diseases on the medical service who required prolonged intubation for ventilatory support experienced more delayed local complications than any other clinical service. On the other hand, patients on the elective and trauma services often underwent tracheostomy under semi-urgent or less than ideal circumstances. Also the length of time the tracheostomy was actually in place

TABLE 2. Local Complications

Clinical Service	Percent	Number
Elective surgery	25	(17/69)
Medicine	28	(16/58)
Trauma	25	(14/57)
Head and Neck	30	(9/30)
Total	26	(56/214)

was much shorter. The different proportions of early and delayed local complications is felt to be related to the circumstances of the procedure and the length of intubation.

The total local complication rate (26%) found in this study compared favorably with other series, which suggested local complication rates of around 40%.[1-3] Similarly, there was a low mortality rate (0.4%) related to the procedure.[1-4] All the procedures were performed during a two year interval and included a wide range of clinical experience, from that of junior house officers to experienced head and neck surgeons. Three patient populations were sampled, the same type of tracheostomy tube was used in all patients, the same type of tracheal incision was used in most patients, and the tracheostomy was an elective procedure in all but five patients. For these reasons, we feel that these figures are valid, that they represent the currently achievable goals for morbidity and mortality of adult tracheostomy.

The distinction between early and delayed complications was established somewhat arbitrarily and was based on time of appearance. Early local complications were usually the result of difficulties with surgical technique or postoperative management. The most common complications were bleeding, tube dislodgement and cannula obstruction. They represented problems of similar magnitude in other studies.[1-3]

Except under circumstances of severe facial trauma, large obstructing tumors and other relatively unusual situations, the patient can be intubated via the upper aerodigestive tract. Tracheostomy can then be performed electively in an operating room under optimal conditions. Postoperative management, at least initially, should be done in a special nursing unit. Most postoperative complications related to management, such as tube dislodgement, inner cannula obstruction and improper tube placement, are avoidable if the patient can be observed closely and if the nursing staff is proficient in caring for patients with tracheostomy.

These observations suggest that some reduction in the rate of local complications is still possible under uniformly good operating conditions and with careful postoperative management. The reduction in local complications would be anticipated because there would be fewer early local complications. It is unlikely that the frequency of delayed local complications would be affected, because prolonged intubation usually represents a reflection of the medical condition of the patient rather than the operative technique and management.

The connection between tracheomalacia, tracheal stenosis and the effects of prolonged intubation with a high pressure cuff are well known and well documented.[3,5-8] Delayed local complication rates were higher on the medical and head and neck services (Table 3), where chronically ill patients remain intubated longer. While the low pressure high volume cuff of the Shiley tracheostomy tube has reduced this risk, there is obviously a time factor to consider. The longer a tracheostomy tube of any type remains in place, the greater the amount of local tissue damage that will occur and the result is a higher incidence of tracheomalacia and stenosis.

Many types of tracheal incisions have been described and their use justified. Entrance to the trachea has been obtained by all manner of incisions, including crosses, T's, inverted T's, flaps, H's, Lazy H's, and excision of cartilage. A number of clinical and experimental studies suggest that either incising or excising the cartilage may be partially responsible for stricture formation in adults.[5,6,9] While the tracheostomy stoma is the most common site for stenosis, there is not uniform agreement regarding its cause.[5,7-10] The type of tracheal incision, the level of tracheostomy, the type and size of the tracheostomy tube, the duration of intubation, and the type of tracheostomy tube cuff are all factors. If the tracheostomy incision is confined beneath the first and above the fourth tracheal rings and if the tracheal wall is not excised, the incidence of clinically significant tracheal stenosis at the stoma site should be less than 5%.[2,3,11-13] These suggestions have been supported by animal studies.[9,10,14] The horizontal incision was used in adults because it is the easiest method of entry into the tracheal lumen, also the least invasive, because it avoids dividing the cartilage. Additionally, there is no evidence, either clinical or experimental, to suggest that this incision is more likely to cause stenosis than any of the other tracheal incisions.[10]

Tracheal stenosis, defined as a radiologically identified reduction in the tracheal lumen, may occur in almost all patients subjected to tracheostomy and prolonged ventilatory support.[7] The clinical significance of

TABLE 3. Local Complications

Clinical Service	Early		Delayed	
	(%)	(No.)	(%)	(No.)
Elective Surgery	88	(15/17)	12	(2/17)
Medicine	50	(8/16)	50	(8/16)
Trauma	93	(13/14)	7	(1/14)
Head and Neck	67	(6/9)	33	(3/9)

the majority of these radiologic stenoses is doubtful. The 4% rate of tracheal stenosis reported in this study represents only those patients with narrowing of the lumen that was clinically identified.

The type of skin incision had no relation to the incidence of severity of local complications. The influence on cosmetic results are minimal because all tracheostomy skin incisions become infected due to the presence of the foreign body tracheostomy tube and all heal by second intention. While admittedly a minor point, the supposed advantage of the transverse incision is more apparent than real since the end result is essentially the same with either incision. The vertical incision is preferred because it is the most direct and bloodless approach to the trachea.

Conclusion

During a two-year period, 214 adult patients underwent tracheostomy at three University of Louisville affiliated hospitals. Local complications occurred in 26%. Early local complications occurred three times more frequently than delayed local complications and were due to difficulties in surgical technique and postoperative management. Most delayed local complications were the result of prolonged intubation. Tracheal stenosis occurred in 4% of the patients and the procedure-related mortality rate was 0.4%.

All tracheostomies were performed during a relatively short time interval. A wide range of clinical experience was included, three patient populations were sampled, the Shiley tracheostomy tube was used in all patients, all except a few procedures were elective, and a horizontal tracheal incision was used in most patients. For these reasons, we suggest that these morbidity and mortality figures represent the current goal for this procedure. With attention to operative technique and postoperative care, further improvement is possible by reducing the frequency of certain early local complications.

The vertical skin incision and the horizontal tracheal incision without incising or excising the cartilaginous rings are preferred. While each represents the easiest and most direct method, neither has a significant disadvantage compared with other methods.

TABLE 4. Tracheal Incision

Type of Incision	Local Complications	
	Percent	Number
Horizontal	16	(22/134)
Cruciate	20	(5/25)
Vertical	22	(6/27)

References 1. Skaggs JA, Cogbill CL: Tracheostomy: Management, mortality, complications. *Am Surg* 35:393–396, 1969. 2. Pemberton LB: A comprehensive review of tracheostomy. *Am Surg* 38:251–256. 1972. 3. Hardy KL: Tracheostomy: Indications, technics and tubes. *Am J Surg* 126:300–310, 1973. 4. Greene DA: Tracheostomy or not? *JAMA* 234:1150–1151, 1975. 5. Webb W, Ozdemin IA, Ikins PM, Parker FB: Surgical management of tracheal stenosis. *Ann Surg* 179:819–824. 1974. 6. Beckman CB, Stansel HC: Complications of tracheostomy and their prevention. *Conn Med* 40:742–745. 1976. 7. Aass AS: Complications to tracheostomy and long-term intubation: A follow-up study. *Acta Anaesthesiol Scand* 19:127–133, 1975. 8. Friman L, Hedenstierna G, Schilot B: Stenosis following tracheostomy: A quantitative study of long-term results. *Anesthesia* 31:479–493, 1976. 9. Lulenski GC, Batsakis JG: Tracheal incision as contributing factor to tracheal stenosis. *Ann Otolaryngol* 84:781–786, 1975. 10. Bryant LR, Juyia D, Greenberg S, Huey JM, Schechter FG, Albert HM: Evaluation of tracheal incisions for tracheostomy. *Am J Surg* 135:675–679, 1978. 11. Kirchner JA: Tracheostomy and its problems. *Surg Clin North Am* 60:1093–1104. 1980. 12. Stauffer JL, et al: Consequences of endotracheal intubation and tracheotomy. *Am J Med* 70:67–75. 1981. 13. Timmis HH: Tracheostomy: An overview of implications, management and morbidity. *Adv Surg* 7:199–233, 1973. 14. Natvig K, et al: Tracheal changes in relation to different tracheostomy techniques. *J Laryngol Otol* 95:61–68, 1981.

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Kosair-Children's Hospital Emergency Room Tabulation Of Diagnoses

SANDRA L. JOHNSON, M.D., JUDY MILLS, M.D. AND MARY A. SMITH, M.D.

The diagnoses made in Kosair-Children's Hospital over one year are tabulated. Their implications in designing a teaching program are discussed.

The Kosair-Children's Hospital Emergency Room (KCH-ER) is a teaching facility affiliated with the University of Louisville. Residents from the Departments of Pediatrics, Family Practice, and Emergency Medicine, plus all Junior Medical students spend varying amounts of time there. Since all aspects of pediatric ambulatory care cannot be adequately covered in the allotted time, it is necessary to encompass into the teaching program the most common problems the physician will be likely to encounter in practice. This study was undertaken to determine the spectrum and frequency of diagnoses made in KCH-ER over one year.

Materials and Methods

The file copies of all KCH-ER charts from July 1981, through June 1982, were reviewed. The final diagnoses were tabulated. Only new diagnoses were counted. Multiple diagnoses on the same patient were counted separately with the exception of the combined diagnoses of otitis media (OM) and upper respiratory tract infection (URI) which was counted only as OM.

Results

During the specified time period 39,191 diagnoses were made on 35,973 patients. Diagnoses were divided into seven groups. (Fig I) Fifty percent were in the "Infection-Inflammation" group and 59% of these were eye, ear, nose, throat. (EENT) and respiratory tract infections. (Fig. II) The following diagnoses were made an average of five to 11 times per day: OM (11 per day), URI alone (eight per day), and pharyngitis/tonsillitis (six per day). Gastrointestinal tract infections comprised 14% of infections with gastroenteritis (GE) diagnosed an average of seven times per day. Viral syndrome (VS) was diagnosed an average of five times per day. Seasonal variance was found with several diagnoses. Infections with a peak incidence in February were OM, GE, and bronchiolitis; in March, URI and pneumonia; in July, VS; in August, aseptic Meningitis; and in October, croup. All skin infections were more commonly diagnosed in the summer months. These diagnoses were still seen an average of at least once per day in any one month except bronchiolitis, croup, and aseptic meningitis.

Trauma related diagnoses comprised 23% of the total. (Fig. III). Lacerations accounted for 29% of these. Trauma to an extremity comprised 26% and of these 27% involved a fracture. Trauma to the head and face was diagnosed in 22% and a fracture was involved in 5% of these. The incidence of trauma diagnoses was highest during the summer months.

Diagnoses in the group "Other Medical-Surgical" comprised 10% of all diagnoses. (Fig. IV). Specific diagnoses in this group made frequently included the following: (1) Those made an average of once per day — afebrile seizures (393) and ingestion of toxic substances (371); (2) Those made an average of every other day — constipation (260) and febrile seizures (222); and (3) Those made an average of once per week - nonspecific rash (115), diaper rash (111), nosebleed (103), acute bleed in an hemophiliac (90), anemia (79), inguinal hernia (75), colic (71), feeding problem (65), gastroesophageal reflux (65), seborrhea (62), diabetic ketoacidosis (58), and ventriculoperitoneal shunt obstruction/infection (56).

The most frequent diagnosis in the "Allergic-Immunologic" group (Fig. V) was asthma which was diagnosed an average of five times per day. There was a seasonal variance with peaks in November and May.

FIG. I

DIAGNOSES	#	%
Infection–inflammation	19,370	50
Trauma	8,933	23
Other medical-surgical	4,010	10
Allergic–immunologic	2,893	7
Service–clerical	2,384	6
Undiagnosed symptoms or lab findings	1,139	3
Normal exam or normal variant	432	1
	39,191	100

FIG. II

INFECTION – INFLAMMATION	#	%
Eye, Ears, Nose, Throat, Respiratory	11,519	59
Gastrointestinal	2,798	14
Generalized viral	2,167	11
Integument	980	5
Fungal	507	3
Hematological–lymphatic	487	3
Urinary	368	2
Central Nervous System	286	1
Genital	154	1
Other	104	1
	19,370	100

FIG. III

TRAUMA	#	%
Laceration	2,611	29
Extremity (soft tissue or fracture)	2,362	26
Head and face (soft tissue or fracture)	1,949	22
Torso (soft tissue or fracture)	490	5
Foreign body	479	5
Burn	402	5
Bites	218	3
Other	153	2
Abuse	137	2
Puncture wound	102	1
	8,933	100

The group of "Service-Clerical" included patients who came in to the emergency room for recheck of a previously diagnosed condition, for medication administration or venipuncture, for suture removal or care of a tube (gastrostomy, *etc*). These comprised 6% of all diagnoses.

Undiagnosed symptoms or laboratory findings comprised 3% of all diagnoses. The most common symptom was pain (751) and in 46% was abdominal and in 17% was headache. The most common unexplained abnormal laboratory finding was hematuria.

Discussion

Currently KCH-ER cares for local emergencies and serves as a referral center for many areas of Kentucky and Indiana. It is also used as a primary care center for many inner-city residents without private physicians. Based on this report, our Emergency Room training program should utilize approximately one-half of instruction time on evaluation of children with infections particularly those of EENT and the respiratory tract. Although certain infections show seasonal variation there are only three commonly diagnosed conditions (croup, bronchiolitis, and aseptic meningitis) which a resident might not encounter by spending a block of

FIG. IV

OTHER MEDICAL – SURGICAL	#	%
Miscellaneous	1,222	30
Neurological	722	18
Gastrointestinal	692	17
Dermatologic	515	13
Hematologic	214	5
Reproductive	160	4
Eye, Ear, Nose	142	3
Musculoskeletal	106	3
Cardiac	104	3
Endocrine	96	2
Respiratory	43	1
Renal	24	1
	4,040	100

FIG. V

ALLERGIC – IMMUNOLOGIC	#	%
Asthma	1,939	67
Acute allergic reaction	466	16
Reactive airway disease	171	6
Contact dermatitis	160	6
Other	157	5
	2,893	100

time in the emergency room rather than interspersing time throughout the year.

Workup of trauma cases, particularly to the head and extremities, should occupy approximately one-fourth of instruction time. Particular emphasis should be placed on management of lacerations.

Other topics the resident should be exposed to include acute management of asthma, seizures, diabetic ketoacidosis and workup of abdominal pain and headache.

Determination of whether any particular instance is a true emergency or not cannot always be reliably determined by the final diagnosis. However, the large number of nonemergency diagnoses tabulated reflects the extent of the usage of this emergency room as a primary care center. This situation is expected to change when the proposed Citicare Health Plan goes into effect. These data may serve as a baseline in evaluating the effectiveness of the new health plan. Serial tabulations of this type may aid in projecting future Emergency Room expansion and equipment needs.

(A complete list of specific diagnoses may be obtained from the authors.)

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EDITORIAL

BEFORE SCHEDULING SURGERY WITH NPO
BE CERTAIN AND CHECK WITH YOUR PRO

FORBID THAT YOU ORDER THAT EKG
LESS YOU WRONGFULLY EXCEED YOUR DRG'S

Author confused

Time was when most physicians believed they had a handle on medical jargon, especially abbreviations. Recall our first H & P, with carefully worded C.C. and laborously extracted P.I. Hearts revealed normal R and R and EENT was N/R.

And time brought sophistication to our lingo. The ECG revealed LBBB. LDH isoenzymes demonstrated a "flip" pattern and the elevated CPK level was accompanied by a MB band.

But enough **is not** enough. Now we may see a patient referred from an HMO. If said patient needs hospitalization we call the PRO. Hospital reminds us that we should remain alert to the DRG's and order SMAC's and EEG's with discretion. Meanwhile the poor radiologists and pathologist sit and worry about their RCE's.

G. Randolph Schrodt, M.D.

Deceased Kentucky Physicians 1983

Roger D. Akers, Hindman

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Charles F. Blankenship, Louisville

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List of names of deceased physicians available to the Journal as of October 15, 1983

Requiem

Under the wide and starry sky
Dig the grave and let me lie:
Glad did I live and gladly die,
And I laid me down with a will.

This be the verse you grave for me:
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DESCRIPTION: Each sustained release capsule contains 12 mg of Chlorpheniramine Maleate, USP and 75 mg of Phenylpropanolamine Hydrochloride, USP in a base to provide prolonged activity.

INDICATIONS: For the treatment of the symptoms of seasonal and perennial allergic rhinitis and vasomotor rhinitis, including nasal obstruction (congestion).

CONTRAINDICATIONS: Hypersensitivity to any of the components, concurrent MAO inhibitor therapy, severe hypertension, bronchial asthma, coronary artery disease, stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction. Do not use in children under 12 years.

Do not use this drug in patients with narrow-angle glaucoma, obstructive or paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrage, severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis. Do not use in nursing mothers.

Use in treating lower respiratory tract symptoms, including asthma, is contraindicated.

WARNINGS: Caution patients about activities requiring alertness (e.g., operating vehicles or machinery). Antihistamines are more likely to cause dizziness, sedation, and hypotension in elderly patients. Patients should also be warned about the possible additive effects of alcohol and other CNS depressants.

Usage In pregnancy: Safe use in pregnancy has not been established. Use only when the potential benefits have been weighed against the possible hazards to the mother and child. Note that an inhibitory effect on lactation may occur.

PRECAUTIONS: Use with caution in patients with a history of bronchial asthma, increased intraocular pressure, hyperthyroidism, cardiovascular disease, hypertension, hiatal hernia with reflux esophagitis, intestinal atony of the elderly or debilitated intestinal obstruction, myasthenia gravis, renal function impairment, and ulcerative colitis (severe).

Drug Interactions: MAO inhibitors, Alcohol or CNS depressants, especially anesthetics, barbiturates, and narcotics.

ADVERSE REACTIONS: Prolongs the response to nervous stimulation, potentiates the response to norepinephrine, and inhibits the response to tyramine.

Slight to moderate drowsiness occurs relatively infrequently with Chlorpheniramine Maleate. Other possible side effects common in antihistamines in general include perspiration, chills, dryness of mouth, nose and throat.

Cardiovascular System: Hypotension, headache, palpitations, tachycardia, extrasystoles.

Hematologic System: Hemolytic anemia, thrombocytopenia, agranulocytosis.

Nervous System: Sedation, dizziness, disturbed coordination, fatigue, confusion, restlessness, excitation, nervousness, tremor, irritability, insomnia, euphoria, paresthesias, blurred vision, diplopia, vertigo, tinnitus, acute labyrinthitis histeria, neuritis, convulsions.

Gastrointestinal System: Epigastric distress, anorexia, nausea, vomiting, diarrhea, constipation.

Genitourinary System: Urinary frequency, difficult urination, urinary retention, early menses.

Respiratory System: Thickening of bronchial secretions, tightness of chest and wheezing, nasal stuffiness.

DOSAGE AND ADMINISTRATION: Dosage should be individualized according to the needs and response of the patient. Adults: one capsule every 8 to 12 hours not to exceed 3 capsules daily. Not for use in children under 12 years of age.

OVERDOSAGE: Treatment of the signs and symptoms of overdosage is symptomatic and supportive. In the event of overdosage, emergency treatment should be started immediately.

Treatment: The patient should be induced to vomit, even if emesis has occured spontaneously. Vomiting by the administration of ipecac syrup is a preferred method. However, vomiting should not be induced in patients with impaired consciousness. Stimulants (analeptic agents) should not be used. Vasopressors may be used to treat hypotension. Short-acting barbiturates, diazepam or paraldehyde may be administered to control seizures. Hyperpyrexia, especially in children, may require treatment with tepid water sponge baths or a hypothermic blanket. Apnea is treated with ventilatory support.

HOW SUPPLIED: Green and clear capsules with green and white beads. Bottles of 100 tablets. NDC 0524-0031-01

Store at controlled room temperature 15-30°C (59°-86°F.).

CAUTION: Federal law prohibits dispensing without prescription.

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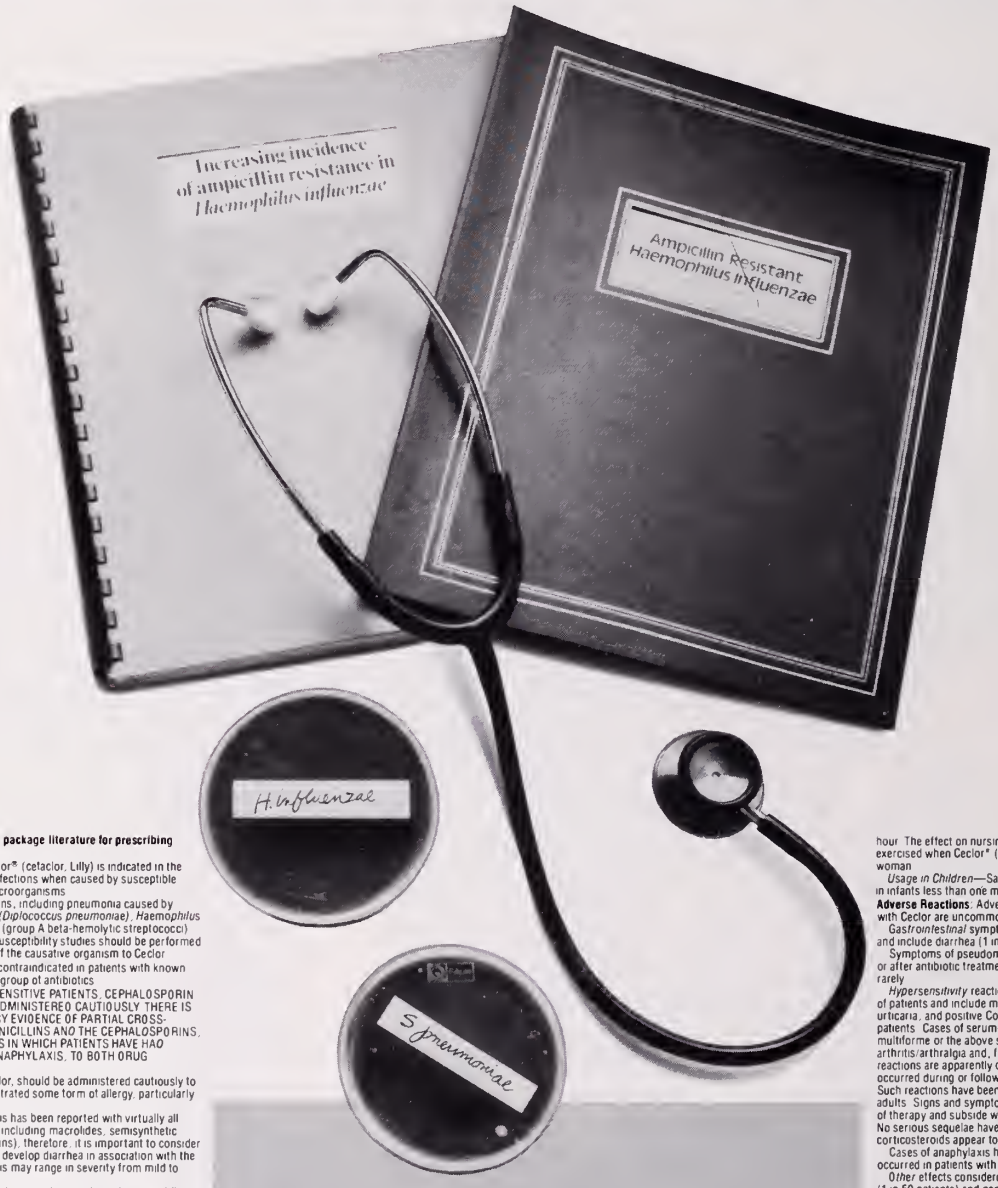
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Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

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Brief Summary. Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out

Precautions: *General Precautions*—If an allergic reaction to Ceclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly)

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis

Usage in Pregnancy—Pregnancy Category B—Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed

Nursing Mothers—Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor® (cefaclor, Lilly) is administered to a nursing woman

Usage in Children—Safety and effectiveness of this product for use in infants less than one month of age have not been established

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70)

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients)

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician

Hepatic—Slight elevations of SGOT, SGPT, or alkaline phosphatase values (1 in 40)

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40)

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200)

[061782R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.*

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

References

1. Antimicrob. Agents Chemother., 8: 91, 1975.
2. Antimicrob. Agents Chemother., *11*: 470, 1977.
3. Antimicrob. Agents Chemother., *13*: 584, 1978.
4. Antimicrob. Agents Chemother., *12*: 490, 1977.
5. Current Chemotherapy (edited by W. Siegenthaler and R. Luthy), II: 880. Washington, D.C.: American Society for Microbiology, 1978.
6. Antimicrob. Agents Chemother., *13*: 861, 1978.
7. Data on file, Eli Lilly and Company.
8. Principles and Practice of Infectious Diseases (edited by G. L. Mandell, R. G. Douglas, Jr., and J. E. Bennett), p. 487. New York: John Wiley & Sons, 1979.

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

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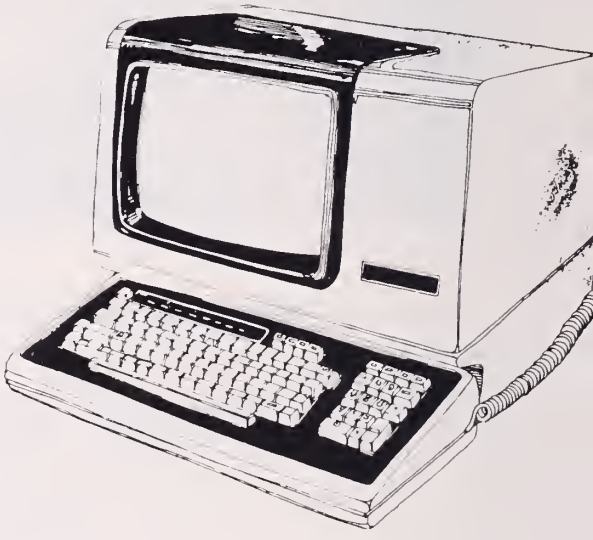
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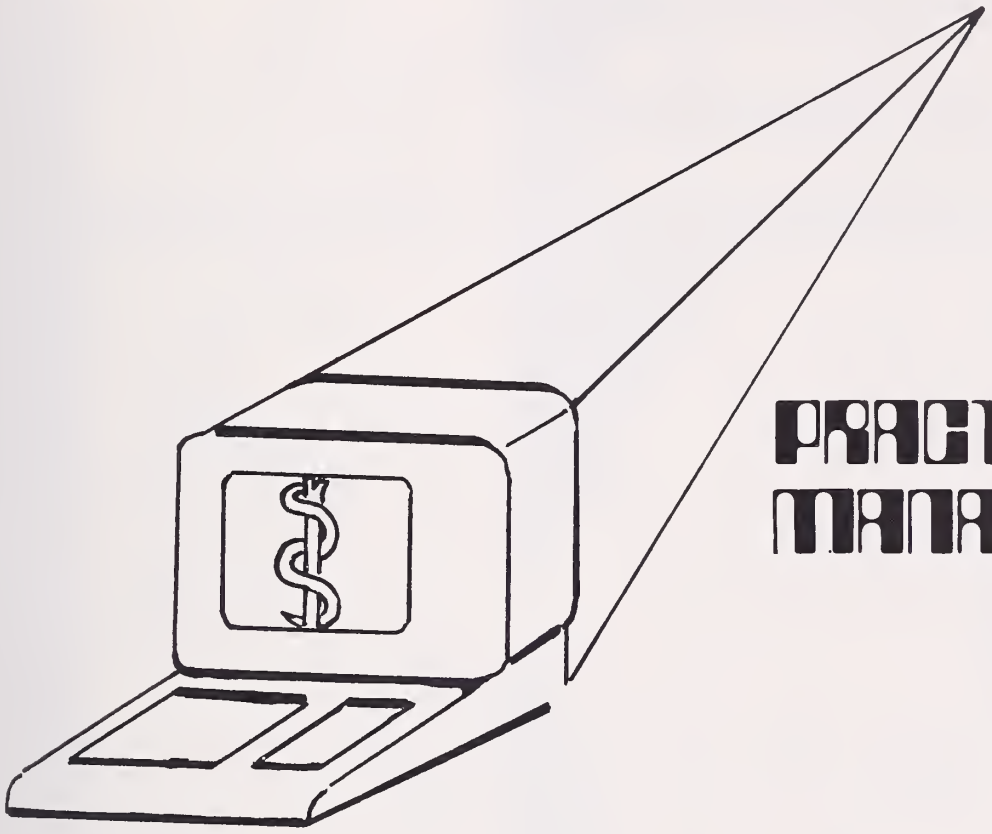
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SPECIAL ARTICLE



PRACTICE MANAGEMENT

Future Expectations of Computers in Medicine

The computer, although not spawned by the Space Age, has been greatly assisted, modified, and enhanced by the space program. Its efforts provided the innovations that resulted in miniaturization of computers and refinement of design. This enabled man to effectively incorporate these technological changes which assisted in reducing the cost of computers and making it accessible to society. The cost of computers has dramatically decreased while their power to compute has increased substantially.

The application of computers to a medical practice has already encompassed the past decade and we have just begun to explore its use in the health care of the populus. Although it is still experimental, the clinical/diagnostic computer is already being developed as a tool in assisting the physician with prompt diagnosis and treatment of a patient. In recent experiments, a clinical computer was found to appropriately diagnose only 25% of cases presented to it, whereas the clinicians used as a control in the test of the computer appropriately diagnosed 55% of the cases in the first review. It seems indicated that man still has that certain sixth sense that is not programmable and it may be that the computer will never be able to totally accomplish this feat. However, its assistance as an aid to physicians in health care will be instrumental in the future. The AMA-GTE network is one example of medicine's future use of computers and telecommunications. The AMA-GTE network will offer:

1. drug information,
2. disease information,
3. social, economic, bibliographical information, and
4. medical procedure coding and nomenclature data bases.

These data bases will be constantly updated and accessible to any physician in the country who subscribes to this service. The network features a system of computers that link the physician's office computer or terminal with the master computer in another location. Currently this is done by telephone lines, but within a decade almost all major communications will be transmitted by satellite.

The National Aeronautical Space Administration (NASA) is currently planning to deploy major commu-

nication satellites which will revolutionize the telecommunications market and make all data bases located in large computers in sites such as Chicago, New York, and Los Angeles available to a physician within seconds. A physician's office will in the near future have a micro dish (antenna) of no larger than a foot in diameter protruding from his office building rooftop that will enable him to communicate with his colleagues and other health care facilities around the world.

Also being pioneered by the AMA for physicians is MED/MAIL. This electronic mail system will offer quicker communication within the medical community either from peer to peer or physician to hospital. Electronic mail offers an individual rapid communication and transmission of data pertinent to claims processing or clinical data to be reviewed by another source.

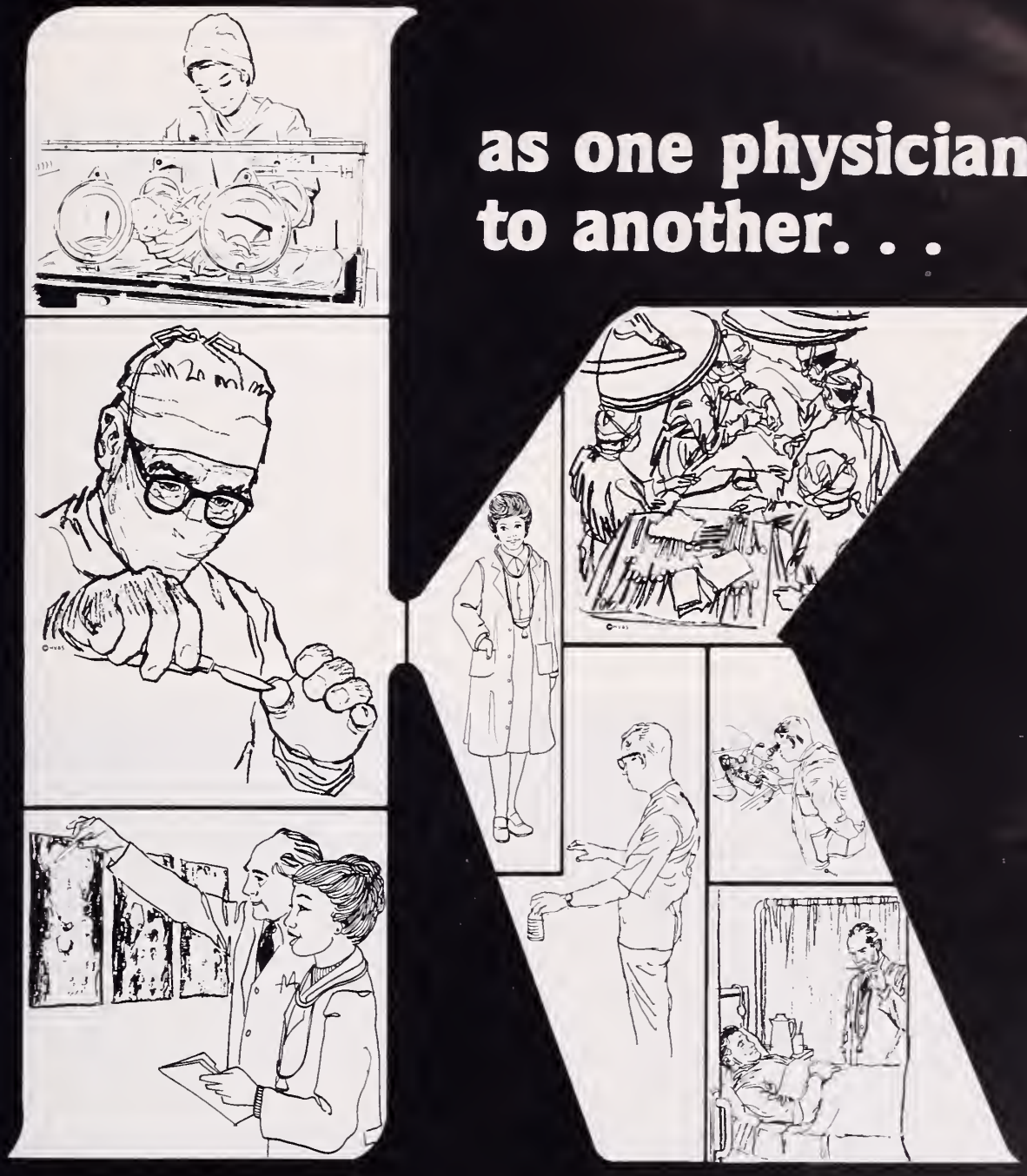
The Doctor's office in the future will be linked with the hospital, his home and, if he desired, from any place in the world. The telephone and computer terminal will merge in the future whereby video displays of the party being spoken to will be transmitted simultaneously. These items are not science fiction but currently exist and only the mass production which makes items economically feasible will result in their widespread use. Also the advent of the large communications satellites will quickly make these things a reality. The future computer will also utilize three-dimensional video to aid physicians in conducting consultations from remote sites. Computer enhanced videos are already in use and the recent breakthrough in three-dimensional video without the use of special glasses will add new tools to the physicians' practice. The computer will assume a major role in monitoring and maintaining all aspects of the physician's office including support utilities, personnel and patient scheduling.

Prototypes of voice activated and controlled computers are currently used on a small scale in security operations but it is envisioned that within five years voice will replace standard keyboard input. Some of the obstacles to overcome in voice controlled applications is dialect, pronunciation, and a way for the computer to understand the voice during periods of stress or excitement. A computer recently released will accept up to one hundred word vocabularies, but the latest edition of Webster's Dictionary listed over 30,000 words.

Physicians can be assured that computers will continue to decrease in size while increasing in power. They will become diagnostic tools to be utilized by even solo practitioners in day to day practice. Future physicians will become dependent on the vast data bases in order to be familiar with the hundreds of drugs introduced to the market each year and to remain familiar with the treatments that are available for their diagnoses. These aids are viewed as a major step forward in man's quest to control the spread of disease and insure that quality health care is provided. Computers have become invaluable to the research of drug therapy in incurable disease and greatly enhance the review time of data and the subsequent results. Tracking diseases and isolating health problem areas will all see increased use of the computer in the health care area.

At the beginning of this series of articles, I indicated that we have entered the computer revolution. Not since man experienced the industrial revolution has a concept made such a dramatic impact on society. Many wonder whether we will be able to cope with the vast influx of information that will be readily available to us and still be able to provide the personalized care that the population has come to expect. I believe that there will be a harmony between man and machine because man has always found the opportunity to utilize his environment to meet his potential. By the year 2000, the computer will be as much an integrated part of society as the telephone, radio, and television have become. The dawn of a new era is upon us all and we will continue to experience a technological explosion that has encompassed the past two decades. Physicians will be in the middle of this development which will require of them new skills and increase technological training in the future. Medicine will make major leaps in the 21st century that will be possible because of the foundation set by the automation of society in the 80's. The future awaits us.

This is the tenth and last in a series of articles by Joe Witherington, Jr., System Manager for KMA and KMIC.



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Highlights Of The 1983 KMA Annual Meeting

Officers

During the 133rd KMA Annual Meeting of the House of Delegates Charles C. Smith, Jr., M.D., Louisville was elected KMA President-Elect.

Charles C. Smith, Jr., M.D., a Louisville internist, is former President of the Jefferson County Medical Society and the Louisville Society of Internists. Doctor Smith served KMA as Vice President during 1982-83 and previously served as Scientific Editor of the *Journal of KMA*.

Wally O. Montgomery, M.D., Paducah, general surgeon and former two-term Trustee, was elected Vice President by the KMA House of Delegates and re-elected as Alternate Delegate to the AMA. Doctor Montgomery is a Fellow of the American College of Surgeons.

Donald C. Barton, M.D., Corbin, a family practitioner, was named as Chairman of the Board of Trustees. Doctor Barton has served as Trustee from the 15th District since 1978 and is a past Chairman of KEMPAC.



Left to right, Dwight L. Blackburn, M.D., KMA Past President; James B. Holloway, Jr., M.D., KMA President; and Charles C. Smith, Jr., M.D., KMA President-Elect.

Richard F. Hench, M.D., a Lexington internist was named Vice Chairman of the Board for 1983-84.

Peter C. Campbell, Jr., M.D., Past President of the Jefferson County Medical Society, was elected Speaker of the House of Delegates and Thomas L. Heavern, Jr., M.D., Highland Heights pediatrician and former KMA Parliamentarian was elected Vice Speaker.

In other elections the KMA House of Delegates elected John D. Noonan, M.D., Paducah, 1st District Trustee. Reelected were Henry R. Bell, M.D., Elkton, 3rd District Trustee; Thomas R. Taylor, M.D., Elizabethtown, 4th District Trustee; Danny M. Clark, M.D., Somerset, 12th District Trustee and Ronald D. Hall, M.D., Pikeville, 14th District Trustee.

Alternate Trustees elected were: Fred D. Austin, III, M.D., Paducah, 1st District; N. H. Talley, M.D., Princeton, 3rd District; Wreno M. Hall, M.D., Elizabethtown, 4th District; David C. Liebschutz, M.D., Danville, 12th District and James R. Pigg, M.D., Pikeville, 14th District.

President's Luncheon

During the President's Luncheon, Ballard W. Cassady, M.D., Pikeville, was honored as recipient of the 1983 KMA Distinguished Service Award. Doctor Cassady was honored for his long and distinguished service to the KMA and for his role in the development and ongoing success of the Kentucky Medical Insurance Company. He is a past KMA President and has served as President of the Pike County Medical Society. He also served as Chairman of the KMA Board of Trustees from 1973 to 1974 and was a member of the Governor's Commission on Professional Liability Insurance. Doctor Cassady is presently Chairman of the Board of KMIC.

Harry A. Lehman, Executive Secretary of the Jefferson County Medical Society received the KMA Layman Award for outstanding accomplishments in the field of public health and serivce to his community. Mr. Lehman is retiring in November after serving the JCMS for the past 28 years.





Gubernatorial Candidates Martha Layne Collins (D), (left) and James P. Bunning (R), (right) were guest speakers at the annual KEMPAC Seminar.



Robert Lich, Jr., M.D., Louisville was presented the KMA Educational Achievement Award during the first meeting of the House of Delegates.



More than 2000 people attend this year's Annual Meeting at the Ramada Inn/ Bluegrass Convention Center. Next year's meeting will be held at the Hyatt Regency/Lexington Center.



Ballard W. Cassady, M.D., Pikeville (left) received the KMA Distinguished Service Award and Harry A. Lehman, Executive Secretary of the Jefferson County Medical Society (right) received the KMA Layman Award during the President's Luncheon. Both awards were presented by S. Randolph Scheen, M.D., KMA Secretary-Treasurer.

Robert Lich, Jr., M.D., of Louisville, retired Professor of Urology and Chief of Section at the University of Louisville from 1948-1974, was presented the KMA Educational Achievement Award. Doctor Lich is a past member and President of the Board of Examiners, American Board of Urology.

Guest speaker at the President's Luncheon was Edward R. Annis, M.D., Past President of the AMA who defended America's health delivery system and providers of health care. Doctor Annis called upon physicians and hospitals to educate patients and their families to the dangers of overreacting to rising health care costs. He reminded the audience that physicians, hospitals, and nursing homes have responded to a challenge issued under the "Great Society" and made high quality, accessible health care available to all Americans. Reminding the audience that government pays the total cost of roads, guns, tanks, and buildings, Doctor Annis questioned government's rationale in refusing to reimburse providers for health care. Using an example that 17½% of the G.N.P. goes for recreation, he asked if 10% was too much to pay for health care.



Charles C. Smith, Jr., M.D., accompanied by this wife, made his acceptance speech after being chosen President-Elect for 1983-84.



KMA Delegates considered 46 reports and 27 resolutions during this year's session.

House of Delegates

During the first meeting of the House of Delegates on September 19, Ms. Ellen Sklar, AKMA Past President presented AMA-ERF checks to the two medical schools on behalf of the Auxiliary. Auxiliaries across the country raise funds annually for the AMA-ERF which is in turn proportionately returned to medical schools for educational purposes. A check in the amount of $13,463.98 was presented to Peter P. Bosomworth, M.D., Chancellor, University of Kentucky Medical Center and Donald R. Kmetz, M.D., Dean of the University of Louisville School of Medicine accepted a check for $17,008.78.



Fred C. Rainey, M.D., Elizabethtown, AMPAC Chairman, was honored with the Sterling Silver Julep Cup. Traditionally, this token of appreciation is given by KEMPAC to the Chairman of the American Medical Political Action Committee.



AKMA Past President, Ellen Sklar presented AMA-ERF checks to Peter P. Bosomworth, M.D., (left) Chancellor, U of K Medical Center and Donald R. Kmetz, M.D., Dean of the U of L School of Medicine.



Richard F. Heuch, M.D., Lexington, KMA Board Chairman, talks with Ardis D. Hoven, M.D., KMA Delegate from Fayette County during a break in the first House meeting.



Carl Cooper, Jr., M.D., Bedford chats with Jefferson County Delegate, Martha Keeney Heyburn, M.D.



Reference Committees met September 19 to consider 46 reports and 27 resolutions.



Gary R. Wallace, M.D., (left) Fayette County Delegate, talks with Edwin J. Nighbert, M.D., President of Fayette County Medical Society.



This year's Report of the Rules Committee called for a one-time rule to elect Delegates and Alternate Delegates to the AMA. This rule was necessary because Kentucky had become eligible for an additional Delegate position from increased membership.

Reports of the KMA committees and Resolutions were officially introduced. The Report of the Rules Committee was given which called for a one-time rule to elect Delegates and Alternate Delegates to the American Medical Association. This rule was necessary because Kentucky had become eligible for an additional Delegate position owing to increased membership.

The second meeting of the House of Delegates convened on Wednesday evening where elections of officers and Delegates took place and the main business considered was report of 46 committees and 27 resolutions.

House of Delegate actions on these issues included:

- Opposition to preauthorization for hospital admission of Medicare and Medicaid patients.
- Withdrawal of support of the Kentucky Medical Assistance Program as currently operating and support of appropriate funding for primary medical services before any new or non-medical services are initiated.
- The recommendation of a mechanism to improve access by Health Care of indigent patients and evaluation of an alternative funding mechanism.
- Adoption of a dues increase of $75.
- Creation of a practice management and computer services company as a membership benefit.
- Support for periodical retesting of vision for drivers license renewal and stiffer penalties for those driving under the influence of alcohol or drugs.
- Consideration of the development of a new section on hospital medical staffs in the House of Delegates.

Five physicians were elected by the House of Delegates to serve on the 1984 Nominating Committee. Members elected were: Jerry W. Martin, M.D., Bowling Green, Chairman; James S. Brashear, M.D., Central City; C. Dale Brown, M.D., Paducah; E. Dean Canan, M.D., Louisville and Paul J. Sides, M.D., Lancaster.

Attendance

2,048 persons registered for the Annual Meeting including over 1,200 physicians. General Scientific and Specialty Group sessions were well attended as were both meetings of the House of Delegates. The 1984 KMA Annual Meeting is scheduled for September 17-20 at the Hyatt Regency Hotel, Lexington Center in Lexington.

Winners of the Scientific Exhibits Award for Excellence during the Annual Meeting were: "Open Cancellous Bone Grafting in the Management of Chronic Osteomyelitis," Bijan Ahmadi, M.D.; Bennett D. Cotton, M.D.; D. Kay Kirkpartick, M.D.; James W. Harkess, M.D., Ch.B.; William C. Ramsey, M.D., and Wayne W. Kotcamp, M.D. and "The Medical Effects of Nuclear War," Doris Pipkin, M.D.





Physicians had the opportunity to speak with representatives from more than 100 companies who exhibited at this year's Annual Meeting.

September 26, 1983

Robert G. Cox
Executive Vice President
Kentucky Medical Association
3532 Ephraim McDowell Drive
Louisville, Kentucky 40205

Dear Mr. Cox:

Thanks very much for your help in arranging the pleasant stay I recently experienced at the Kentucky Medical Association meeting. Thanks very much also for the thoughtfulness of the handsome gift. I shall retain very fond memories of the meeting.

Very sincerely,

Bradley E. Smith, M.D.
Professor and Chairman

October 6, 1983

James B. Holloway, M.D.
President
Kentucky Medical Association
3532 Ephraim McDowell Drive
Louisville, KY 40205

Dear Doctor Holloway:

I would like to express my sincere appreciation to you and the Kentucky Medical Association for giving me the opportunity to attend your 1983 Annual Meeting. It was truly an enjoyable occassion for Frances and I, and your gracious hospitality will always be remembered.

As you begin your term as President of the Kentucky Medical Association, I wish you the best of success, and look forward to maintaining the very cordial relationship between our state medical organizations.

Thank you again, and please do not hesitate to contact me if I can be of assistance to you.

Sincerely,

Robert P. Johnson, M.D.
President
Illinois State Medical Society

September 22, 1983

Robert G. Cox
Executive Vice President
Kentucky Medical Association
3532 Ephraim McDowell Drive
Louisville, Kentucky 40205

Dear Mr. Cox:

My wife Ann and I would like to let you know of the pleasant visit we had with the Kentucky Medical Association at its meeting in Louisville, Kentucky this past week. We particularly want to thank you and the association for the framed Kentucky Derby picture. This will grace the walls of our family room and will be a constant reminder of the pleasant time we had and of the interesting people we came to know more intimately.

Thank you for having us in Louisville.

Sincerely,

David A. Culp, M.D.

September 28, 1983

Robert G. Cox
Executive Vice President
Kentucky Medical Association
3532 Ephraim McDowell Drive
Louisville, KY 40205

Dear Bob:

I want to take this opportunity to thank you so much for the framed Kentucky Derby picture. Since we have some horses down here in Florida, I cherish this very fine picture.

I had a wonderful time meeting the many impressive people in your organization.

With best wishes, I remain

Sincerely your,

James J. Cerda, M.D.

September 26, 1983

Mr. Robert G. Cox
Executive Vice President
Kentucky Medical Association
3532 Ephraim McDowell Drive
Louisville, Kentucky 40205

Dear Mr. Cox:

It was such a pleasure to come to your 133rd Annual Convention of the Kentucky Medical Association.

The staff was both efficient and exceedingly pleasant. I have previously been to a number of State medical societies and yours was unexcelled in its quality.

I certainly appreciate the Kentucky Derby print and will frame it for my son who is a race horse afficionado.

I note that your address is Ephraim McDowell Drive. The University of Kentucky was nice enough to give me a print of Ephraim McDowell's home. My father, a retired general practitioner and President of the Missouri Medical Society, is a great fan of Dr. McDowell and all of his history and I am sure he will appreciate this.

I certainly appreciate all your help.

Best wishes.

Sincerely yours,

John B. McCraw, M.D., F.A.C.S.

September 27, 1983

Robert G. Cox, Executive Vice President
Kentucky Medical Association
3532 Ephraim McDowell Drive
Louisville, Kentucky 40205

Dear Bob:

I want to thank you personally and also on behalf of the Ohio State Medical Association for the gracious hospitality you and the KMA showed me this week.

The picture of Sunny's Halo and your many kindnesses will be a memory that will last for a very long time.

It was a pleasure to see Dwight and Dot. I most enjoyed the chat that Dwight and I had on Tuesday afternoon. Charlie and Rosemary Smith could not have been more gracious and I know that he will make an excellent president.

You have a fine, well-organized association and have shown the quality of your leadership by your many innovative programs. I know that the KMA will have an excellent year and I look forward to seeing many of you in California in December.

Thanks again for your most gracious hospitality and many kindnesses.

Most sincerely yours,

S. Baird Pfahl, M.D.

Was Your Delegate Present?
ROLL CALL
1983 House of Delegates
KMA Annual Meeting

OFFICERS

		First Session	Second Session
Speaker	Peter C. Campbell	Present	Present
Vice Speaker	Thomas Heavern	Present	
President	Dwight L. Blackburn	Present	Present
President-Elect	James B. Holloway, Jr.	Present	Present
Vice-President	Charles C. Smith, Jr.	Present	Present
Secretary-Treasurer	S. Randolph Scheen	Present	Present
Delegate to the AMA	David B. Stevens	Present	
Delegate to the AMA	Fred C. Rainey	Present	
Delegate to the AMA	Harold D. Haller, Sr.	Present	Present
Delegate to the AMA	Lee C. Hess	Present	Present
Alternate Delegate to the AMA	Kenneth P. Crawford	Present	Present
Alternate Delegate to the AMA	Wally O. Montgomery	Present	Present
Alternate Delegate to the AMA	Donald Barton		
Alternate Delegate to the AMA	Frank Pitzer	Present	Present

TRUSTEES

District			
First	Wally O. Montgomery	Present	Present
Second	Albert H. Joslin	Present	
Third	Henry R. Bell	Present	Present
Fourth	Thomas R. Taylor		
Fifth	Bob M. DeWeese		Present
Sixth	Nelson B. Rue	Present	Present
Seventh	William P. McElwain		
Eighth	Robert E. Smith	Present	Present
Ninth	R. Kendall Brown		
Tenth	Richard F. Hench	Present	Present
Eleventh	Don E. Cloys	Present	Present
Twelfth	Danny M. Clark		
Thirteenth	Garner E. Robinson		
Fourteenth	Ronald D. Hall		
Fifteenth	Donald C. Barton		

ALTERNATE TRUSTEES

District			
First	John D. Hoonan	Present	Present
Second	John W. McClellan	Present	
Third	Sam H. Traughber		
Fourth	John W. Ratliff		
Fifth	E. Dean Canan		Present
Sixth	J. Michael Pulliam		
Seventh	Cecil D. Martin	Present	Present
Eighth	William R. Yates		
Ninth	Robert L. McKenney		
Tenth	Christopher A. Boarman		
Eleventh	Clifford F. Kerby		
Twelfth	David C. Liebschutz	Present	Present
Thirteenth	Jerald M. Ford	Present	Present
Fourteenth	Ronald D. Hall		
Fifteenth	Emanuel H. Rader	Present	Present

PAST-PRESIDENTS

Past President	Ballard W. Cassady		Present
Past President	Frank R. Pitzer	Present	Present
Past President	Robert S. Howell	Present	
Past President	Carl Cooper, Jr.	Present	Present
Past President	John P. Stewart		

DELEGATES
FIRST DISTRICT

		First Session	Second Session
BALLARD	Jesse M. Hunt, Jr.		
CALLOWAY	Charles D. Clark	Present	Present
	Robert Gary Marquardt	Present	Present
CARLISLE			
FULTON	Robert T. Peterson		
GRAVES	C. Douglas LeNeave	Present	Present
HICKMAN	Horace E. Titsworth		
LIVINGSTON	Thomas R. Brandstetter		
MCCRACKEN	Fred Austin, III	Present	Present
	C. Dale Brown	Present	Present
	Larry C. Franks	Present	Present
	James Gwinn, Jr.	Present	Present
	Gary McMillan	Present	Present
MARSHALL	Keith E. Ellis	Present	Present

SECOND DISTRICT

DAVIESS	James E. Anderson		
	William Hall		Present
	Angela Jarvis		
	Joseph M. Kavolus		
	Tom Maddox	Present	Present
	William L. Tyler		Present
	Charles Omar Wilson, Jr.		Present
HANCOCK	B. Presley Smith		
HENDERSON	Kenneth M. Eblen		Present
	John McClellan	Present	
	Walter L. O'Nan	Present	
MCLEAN			
OHIO	Robert E. Norsworthy	Present	Present
UNION	Fiorello G. Malubay		
WEBSTER	Jamie Bon Tiu		

THIRD DISTRICT

CALDWELL	N. H. Talley	Present	Present
CHRISTIAN	Charles Barlowe		
	Delmas Clardy	Present	Present
	Bennett Crowder		Present
	James F. Rozelle		
	J. Nicholas Terhune	Present	
CRITTENDEN	Gary V. James		
HOPKINS	Wallace R. Alexander	Present	Present
	Richard K. Bachman	Present	Present
	C. R. Dodds	Present	Present
	William H. Klompus	Present	Present
LYON	Robert Wayne Hodge		
MUHLENBERG	James S. Brashear		Present
TODD	Larry Brock		
TRIGG	Eduardo Pavon		

FOURTH DISTRICT

BRECKINRIDGE	Robert B. Chambliss		Present
	James G. Sills		
BULLITT	James R. Cundiff	Present	Present
GRAYSON	Victor F. Duvall	Present	Present
GREEN	Robert P. Simmons		
HARDIN-LARUE	Clyde M. Brassfield	Present	Present
	William K. Carney		
	Marion A. Douglass, Jr.		Present
	Wreno M. Hall	Present	Present
	William R. Handley	Present	Present
HART	James P. Crews	Present	Present
MARION	Salem George		
MEADE			
NELSON	Fredricka C. Lockett	Present	Present
TAYLOR	Henry F. Chambers		
WASHINGTON	Brian Wells	Present	Present

FIFTH DISTRICT

JEFFERSON	William Stephen Aaron		Present
	Berel Abrams		
	Richard Allen		Present
	Billy Andrews	Present	
	James G. Baker		
	Arnold Belker	Present	Present
	Ben M. Birkhead		
	David H. Bizot	Present	Present
	Harold W. Blevins	Present	Present
	Glenn W. Bryant		Present
	Jerry B. Buchanan	Present	Present
	W. Cooper Buschemeyer, Jr		Present
	John L. Bunting		Present
	Peter C. Campbell, Jr.	Present	Present
	E. Dean Canan		Present
	James Childers	Present	Present
	Eugene H. Conner		Present
	Samuel L. Cooper	Present	
	Warren M. Cox		Present
	Arthur J. Donovan		
	Robert E. Ellis		
	Larry Florman		Present
	Gary Fox		
	Lawrence Goldberg		Present
	Robert R. Goodin		Present
	Cecil L. Grumbles		
	Lonnie W. Howerton		
	Walter I. Hume, Jr.		Present
	Jerome P. Lacy	Present	
	John Lloyd		Present
	Theodore Lynch		Present
	Joseph C. Marshall, Jr.		
	Edward N. Maxwell		Present
	Russell May	Present	Present
	Roy J. Meckler		Present
	James P. Moss		

	Robert L. Nold, Sr.		Present
	John D. O'Brien		
	Lynn L. Ogden		Present
	Hobert Pence		Present
	C. Kenneth Peters		
	Henry W. Post	Present	Present
	C. Ray Potts		Present
	Barton H. Reutlinger	Present	Present
	William J. Sandman, Jr.		Present
	Jerry W. Seligman		Present
	Robert M. Senese		Present
	Judah L. Skolnick		
	Charles C. Smith, Jr.	Present	Present
	Gerald F. Sturgeon		
	Walter L. Thompson		Present
	Peter Thurman		Present
	Robert S. Tillet		Present
	Donald T. Varga	Present	Present
	Will W. Ward		
	Tom R. Watson	Present	Present
	Lolita Weakley	Present	Present
	Sam D. Weakley	Present	Present
	David H. Winslow, Jr.		
	C. Milton Young, III		Present
	Robert S. Howell, Jr.		
	Marth Keeney Heyburn	Present	Present
	SIXTH DISTRICT		
ADAIR	James C. Salato	Present	
ALLEN	Earl P. Oliver	Present	Present
BARREN	Howard Edgin		
	Daryl P. Harvey	Present	Present
BUTLER	Rex Leuns		
CUMBERLAND	Samuel L. Rice	Present	Present
EDMONSON	Omkar Bhatt		
LOGAN	C.V. Dodson		Present
	Roy McEndre		
METCALFE	L. P. Emberton		
MONROE	James E. Carter	Present	Present
SIMPSON	J. Michael Pulliam	Present	Present
WARREN	John Downing	Present	Present
	Jerry Martin	Present	
	Paul J. Parks		Present
	Luther M. Wilson	Present	Present
	SEVENTH DISTRICT		
ANDERSON	Charles A. Webb	Present	Present
CARROLL	Cecil D. Martin	Present	Present
FRANKLIN	John Paul Broderson		
	J. A. Gergen	Present	Present
	George Hromyak		
	Willis P. McKee, Jr.	Present	Present
GALLATIN			
GRANT			
HENRY	Robert L. Houston, Jr.	Present	Present
OLDHAM			
OWEN			
SHELBY	Willis P. McKee, Sr.	Present	Present
SPENCER	William K. Skaggs		
TRIMBLE	Carl Cooper, Jr.	Present	Present
	EIGHTH DISTRICT		
BOONE	Herbert Francis		
	William Reutman	Present	Present
	Don Swikert	Present	Present
CAMPBELL-KENTON	Gordon W. Air	Present	Present
	Richard Allnutt	Present	
	Carl John Brueggmann		
	Todd M. Cook		
	Thomas Heavern, Jr.	Present	
	Howard A. Herringer, Jr.	Present	Present
	Stephen Jennings	Present	Present
	William B. Monnig	Present	Present
	Mark E. Pelstring	Present	Present
	Fred A. Stine	Present	Present
	Raymond J. Timmerman	Present	Present
	NINTH DISTRICT		
BATH			
BOURBON	William Cox		
BRACKEN	Milton Brindley		
FLEMING	Robert W. Fidler	Present	Present
HARRISON	Don R. Stephens	Present	
MASON	Claude E. Cummins, Jr.		
NICHOLAS	Timothy R. Scott		
PENDLETON	Robert L. McKenney	Present	Present
ROBERTSON			
SCOTT	J. Campbell Cantrill	Present	Present
	TENTH DISTRICT		
FAYETTE	Joseph P. Bark		
	Robert P. Belin		Present
	William E. Blackburn	Present	Present
	Peter P. Bosomworth	Present	Present
	John D. Cronin	Present	Present
	Michael E. Daugherty		Present
	Glenn U. Dorroh	Present	Present
	Harold T. Faulconer	Present	Present
	Ardis D. Hoven	Present	Present
	Dennis B. Kelly	Present	Present
	Paul Kyker		Present
	Priscilla Lynd		Present
	Sally Mattingly	Present	Present
	Edgar McGee	Present	Present
	William R. Meeker, Jr.	Present	Present
	Charles H. Nicholson	Present	Present
	Edwin J. Nighbert	Present	Present
	Preston P. Nunnelley	Present	Present
	John D. Perrine	Present	Present
	Thomas K. Slabaugh	Present	Present
	Russell Travis	Present	Present
	John E. Trevey	Present	
	Gary Wallace	Present	Present
JESSAMINE	Phyllis Corbitt		Present
WOODFORD	Olson Parrott, II		
	ELEVENTH DISTRICT		
CLARK	Harold S. Moberly		
ESTILL			
JACKSON			
LEE	Arnold Taulbee		
MADISON	Clifford Kerby		
	William H. Mitchell	Present	
MENIFEE			
MONTGOMERY	William McKenna	Present	Present
OWSLEY	Mildred B. Gabbard		
POWELL	Charles G. Noss		
WOLFE	Paul F. Maddox		
	TWELFTH DISTRICT		
BOYLE	David C. Liebscutz	Present	Present
	Scott Scutchfield	Present	Present
CASEY	Lewis E. Wesley	Present	Present
CLINTON	Floyd B. Hay	Present	Present
GARRARD	Paul Sides		Present
LINCOLN	Charles E. Crase		Present
MCCREARY			
MERCER	George W. Noe	Present	
PULASKI	Veryl Frye	Present	Present
	Richard Weddle		
ROCKCASTLE	George W. Griffith		
RUSSELL	Rick Miles	Present	Present
WAYNE	John W. Simmons	Present	Present
	THIRTEENTH DISTRICT		
BOYD	Walter L. Cawood		
	William Harrison		Present
	H. B. McWhorter	Present	Present
	Lamar C. Meiss		
	Garner E. Robinson		Present
	William G. Uhron	Present	
	Charles T. Watson	Present	Present
CARTER	William H. Matthew		Present
CASEY	Lewis E. Wesley	Present	Present
ELLIOTT	Brown L. Adkins		
GREENUP	E. W. Unnikrishnan	Present	
LAWRENCE	George P. Carter	Present	Present
LEWIS			
MORGAN			
ROWAN	Ranjit Sinha		Present
	FOURTEENTH DISTRICT		
BREATHITT	E. C. Turner		
FLOYD	Charles Arnett		
	Larry Leslie		
JOHNSON	Pedro M. Arriole	Present	
KNOTT			
LETCHER	Harold Gillespie	Present	Present
MAGOFFIN			
MARTIN	Raymond D. Wells		
PERRY			
PIKE	Russell Davis	Present	Present
	James R. Piss	Present	Present
	Alex Poulos	Present	Present

FIFTEENTH DISTRICT

BELL	Robert B. Matheny	Present	Present
	Charles C. Moore, Jr.	Present	Present
	Kenneth Smith		
CLAY	William E. Becknell, Sr.	Present	Present
HARLAN	R. Smith Howard	Present	
	Milo Schosser		
KNOX	Rogelio A. Acosto		Present
	Rufino Crisostomo	Present	
LAUREL			
LESLIE	Peter J. Morris		Present
WHITLEY	Roemer d. Pitman	Present	Present
	Carmel Wallace, Jr.	Present	Present

The information in the Roll Call was taken from the attendance record cards signed by the delegates prior to the meetings of the House, September 19 and 21.

Members in the News

Gradie R. Rowntree, M.D., clinical professor of community health and Emeritus Chief of the Section of Occupational Medicine at the University of Louisville School of Medicine, was honored on September 2, 1983, when the Humana Hospital University Medical Library was dedicated in his name.

Last May, Doctor Rowntree received the Knudsen Award - the highest honor bestowed by the American Occupational Medicine Association (AOMA) in the field of occupational medicine. The Knudsen Award was established in 1939 by the late General William S. Knudsen, then president of General Motors Corporation. The award has been presented annually since that time in recognition of a physician who has attained distinction in the field of occupational medicine and industrial hygiene.

Doctor Rowntree spent the first 15 years of his professional life in public health, both in rural areas of Kentucky and as director of health in Louisville. He then devoted 25 years to occupational medicine. He served as the first full time medical director at Fawcett Printing Corporation in Louisville and later initiated and directed an occupational health program for the Commonwealth of Kentucky.

Michael J. Hearne, M.D., F.A.C.C., of Madisonville, has been elected to serve as College Governor for the state of Kentucky by the American College of Cardiology's (ACC) Board of Trustees.

Doctor Hearne currently is chief, cardiology section, at Trover Clinic in Madisonville. He received his B.S. degree from Georgetown University and his M.D. degree from Georgetown University School of Medicine, Washington, D.C.

College Governors, who serve three-year terms, are responsible for reviewing all applications for membership to the College within their areas and for making recommendations to the College's Credentials Committee.

ACC, a 12,000-member nonprofit professional medical society and teaching institution, is dedicated to ensure optimal care for persons with cardiovascular disease or those with the potential for developing cardiovascular disease and, through educational and socioeconomic activities, to contribute significantly to the prevention of cardiovascular disease.

Alvin C. Poweleit, M.D., Covington, a medical advisor to the American ex-Prisoners of War (POW) organization, was awarded a plaque for distinguished service during a medical research committee meeting in September. Doctor Poweleit, an eye, ear, nose and throat specialist, was honored for answering more than 800 ex-POW letters asking for medical advice.

CLASSIFIED

All advertisements must be approved by the Board of Editors. Deadline is the first of the month preceding the month of publication.
Charges for advertising are: 20¢ per word. Average word count: 7 words per line. $5.00 minimum. Send payment with order to:

The Journal of KMA
3532 Ephraim McDowell Drive
Louisville, Kentucky 40205

FOR SALE

FOR SALE two physician FAMILY PRACTICE. South Central Kentucky location. Fully equipped clinic near open staff hospital. Retiring, but will stay for orderly transition period. Clinic building for sale or lease. Write P.O. Box 20218, Bowling Green, Ky. 42101.

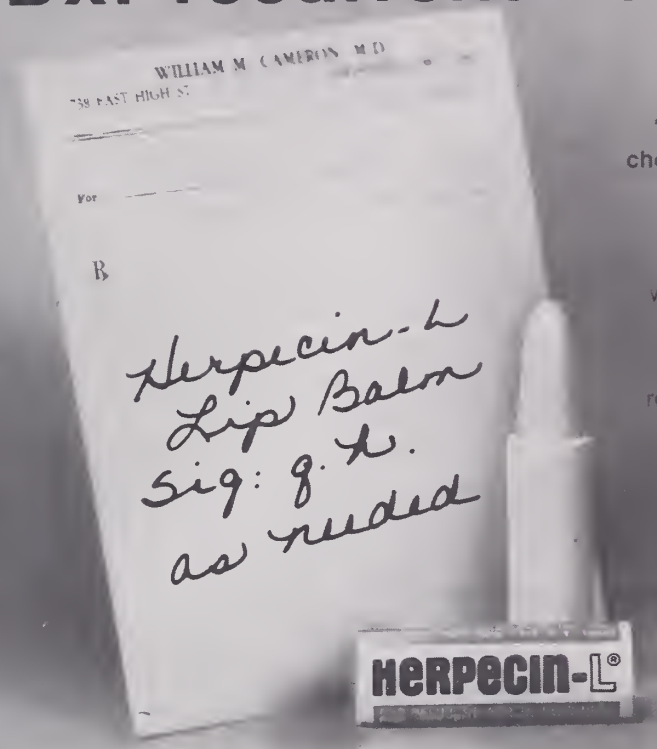
MEDICAL AND OFFICE EQUIPMENT. Electricator/Hyfrecator – Cavitron – Burton 2 years old. Dictating Equipment – Lanier Dictator and Transcribing Machine (Omni), Lanier Vest Pocket Secretary, 2 years old. (502) 245-7984.

BARGAINS!! EQUIPMENT – OFFICE FURNITURE FOR SALE Remodeling my office. What do you need? Don Chatham, M.D., 615 Washington Street, Shelbyville, Ky. 40065. (502)633-3525.

MEDICAL OPPORTUNITY

WANTED – Family Physician to join two physician family practice in Western Kentucky town of 8,000. Fully equipped modern office located next to 60 bed hospital. Send resume to: Ralph Cash, Jr., M.D., P.O. Box 627, Princeton, KY 42445.

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OTC. See *P.D.R.* for Information.
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KMA Response to "An Integrated Health Cost Containment Strategy to Achieve Quality Health Care at an Affordable Cost for Kentucky"

The following is an excerpt from KMA's response to a challenge issued earlier this year by Governor John Y. Brown, Jr., to hospitals, business and labor and to medicine to reduce health costs between July 1983, and June 1984. The response notes several important points often overlooked in the health cost debate, and it is felt that the information contained herein will be useful to physicians in Kentucky.

The Kentucky Medical Association has been challenged by Governor Brown to develop and implement a plan which will result in a savings of $21 million between July 1983 and June 1984 in the physician component of health cost generated in Kentucky. Overall, health costs are significant and are rising. KMA is aware of and concerned with that fact.

Health costs have four basic elements: (1) the basic cost of delivering a service, (2) the cost of ever-changing technology, (3) the degree of utilization, and (4) inflation, which impacts health care just as it does all other aspects of the economy.

The physician can and is addressing inflation. However, we cannot control the cost of goods and services we must purchase to deliver care. Business overhead such as rent and utilities, labor, and liability coverage are largely uncontrollable by the physician as are the costs of pharmaceuticals, medical equipment, and appliances.

Technology and utilization are largely driven by consumers who want quality of care preserved. Thus, only a part of overall health care costs can be affected by physicians alone.

In developing this report, certain basic figures are utilized. According to the Kentucky Bureau for Vital Statistics, the 1980 population of Kentucky was 3,660,000 people. The per capita spending for health care in Kentucky, according to the report entitled, "An Integrated Health Cost Containment Strategy to Achieve Quality Health Care at an Affordable Cost for Kentucky," is $714 per person per year. This compares favorably with the national per capita health care cost of $1,225 per year.

Approximately, 19% of the health care dollar is used to pay for physicians' services. Thus, Kentucky physicians' receive 19% of the $714 Kentucky per capita figure, or $135.60 per capita. This figure, multiplied by the population of the state results in a physician component of overall Kentucky costs of $496,296,000.

In 1982, physicians' charges nationally rose 7.5%, down from the 11.7% increase recorded in 1981. In 1982, the CPI sub-component of other goods and services rose 12.1%, while the all services index rose 4.3%.

It is important to note that various components of the CPI have an influence on its overall results. Housing (46%) and transportation (19%) make up the larget components of the CPI. In 1982, both rose at rates lower than the overall inflation rate. Housing increased 3.6% and transportation 1.7%, compared to the overall increase in the consumer price index of 3.9%.

The rate of inflation in housing fell from an annual increase in 1981 of 10.2%. Transportation fell from a 1981 rate of 11%.

High mortage rates (15.2% in December of 1981) and high unemployment helped hold down the housing segment of the CPI.

The price of fuel is a major component of the transportation index. The fuel component fell 6.5% in 1982. That, coupled with a 1.5% increase in the cost of new vehicles served to hold the transportation inflation rate to the 1.7% increase in 1982.

Thus, two components of the CPI, accounting for 65% of the total, rose at an extremely low rate in 1982; the result of the economic recession and high unemployment. While medical costs were increasing at a higher rate than the overall CPI, the overall CPI rate of increase would probably have been much higher if

the economy was stronger. Thus, the differences in the overall CPI and physician component rate of increase would have probably been much less pronounced. If we examine a comparison of costs over the past five years, a totally different picture emerges.

The annualized all-items component of the CPI rose 9.5% over the past five years, substantially above the 3.9% increase for 1982 and is reflective of the inflationary environment of recent years.

Housing costs rose at a faster rate over the past five years (10.5%) than did all items, but a depressed housing market helped moderate the overall inflation rate for 1982.

Energy costs increased at an annualized rate of 10.5% over the past five years while in 1982 the rate was 1.7%.

The rate of increase for medical care prices was 10.5% over the same period of time. As a result, although the rate of increase for medical care was more than twice that of overall inflation in 1982, it was only slightly above the overall rate that past five years. **In addition, over the past five years the rate of increase for the physicians' services sub-component (9.5%) equalled the rate of increase for the all-items CPI (9.5%).**

Although the national rate of inflation for 1982 was 3.9%, there were regional differences. The medical care component of the CPI increased at a faster rate than the all-items component, ranging from 9.1% in the northeast to 12.7% in the south. This difference is not totally unexpected. The northeast part of the country has severe unemployment problems, while the sunbelt has enjoyed unprecedented population and economic growth.

Many of the southern states are favored as retirement communities by senior citizens. While those over 65 years of age comprise approximately 11% of the population, they account for the consumption of 44% of all health care delivered in Kentucky; and as a result, have some impact on the higher inflation rate cited.

Physician Fees

We are urging Kentucky physicians to try to hold fee increases within the rate of increase of all-services index of the CPI between July 1983 and June 1984. Nationally, the all-services index rose at 4.3% in 1982, as compared to physicians' services which rose 7.5%.

It is important to recognize that fees are simply the price for a given service. The total fee for a service is not always collected. Fees reflect the overhead costs of doing business which include, rent, utilities, labor, bad debts, and charity.

Because the Medicare and Medicaid programs have paid only a part of physicians' charges for the services rendered to program recipients, Kentucky physicians have supported the program since its inception. The Medicaid program in Kentucky pays approximately 60% of physicians' fees resulting in a cost shift to those physicians caring for Medicaid patients. That shift amounted to $12 million in 1980 according to former Cabinet for Human Resources Secretary Grady Stumbo, M.D.

In all areas of the state physicians are assuring that care continues to be available to those who are recently unemployed, and who may have lost health benefits, and thus may not be able to afford the out-of-pocket costs of care.

Using 1982 figures, and a Kentucky physician cost component of the Kentucky per capita cost of $135.60, a growth of 4.3% of $135.60 would yield $5.83, or a new physician component of the per capital spending in Kentucky of $141.43. A growth of 7.5% of $135.60 would yield an increase of $10.17, or a new per capita component of $145.77. The difference of $4.34 per capita multiplied by the population of the state would result in **a savings of $15,884,400 if physicians' charges can be restrained to the all-services component of the CPI, based on 1982 figures.** We must point out that these are projected costs savings which are necessarily based on assumptions which may not prove to be accurate.

It is necessary to emphasize that KMA is a voluntary membership organization. Its active practicing members comprise some 61% of the physicians in the State. KMA can provide a conduit of information to its individual members, but the Association does not control their independent actions and has no legal authority to direct or otherwise influence economic decisions of its membership.

KMA can and will urge that they favorably consider activities which, if implemented, will have an impact on the various factors influencing medical cost inflation.

Hospital Utilization

The average length of stay in Kentucky hospitals for Kentucky Blue Cross patients in 1982 was 5.74 days. The average hospital cost per day during that time in Kentucky for Blue Cross patients was $320.73. [Of that amount, Kentucky Blue Cross estimates a cost shift of $60.22 per day for Medicaid and Medicare and a shift of $45.00 per day for bad debts and charity, for a total of $105.22 (approximately one third of the daily average cost of a hospital stay) spent as a subsidy for federal programs and uncollected charges!]

If the average length of stay could be reduced by .14 days to 5.60 days, approximately $44.93 would be saved per average Blue Cross admission. (The average length of stay (ALOS) of 5.74 multiplied by $320.73 per day results in an average cost of $1,840.99. Reducing the ALOS to 5.6 results in a average admission cost of $1,796.09. The difference between the two is $44.93.) According to Kentucky Blue Cross, there were 131,881 Blue Cross admissions in 1982. Using the above calculations, **a reduction in length of stay by .14 days would result in a savings of $5,925,413 for Blue Cross covered patients. KMA will develop a program to urge its members to reduce the average length of stay as much as possible without jeopardizing the safety and comfort of our patients and will set a goal of a .14 day reduction in the average length of stay between July, 1983 and June, 1984.**

Note, however, that if Medicare and Medicaid were to pay the same rates as all other payors, including individuals, employers, and insurance carriers, the average cost per day could be reduced by $60. If this is applied to a 5.74 day stay, the savings would be $344.40 per average Blue Cross admission. Since Blue Cross had 131,881 admissions last year, not counting those over 65 covered by the Medicare Supplement Program, the savings would be $45,419,816. Clearly, if the state and federal government were to pay their fair share of hospital costs, cost in Kentucky would be substantially reduced.

The Brown Administration has indicated that it intends to implement a number of programs to help affect changes in life styles of state and Boards of Education employees. We very much encourage those efforts and although long-term, we feel they will have the greatest impact on health costs. National estimates indicate that one-half of all health related costs are the result of life styles. Applying this to Kentucky, one-half of the $714 spent in Kentucky by each citizen, or $357 per person, per year is spent because of unhealthful life styles. This results in $1,306,620,000 spent in Kentucky on what might be characterized as essentially preventable disorders.

Kentucky physicians have always worked toward helping patients modify their life styles when indicated. Physicians routinely warn of the dangers of smoking, over eating, and alcohol and drug abuse; and have long supported measures which enhance public safety, such as automobile restraints for infants, motorcycle helmet laws, and environmental and public health legislation.

The paradox is that life styles, which generate the largest health related cost to society, are largely uncontrollable by health care providers.

It is difficult to influence people to wear seat belts, to eat properly, to exercise, to drive safely, to use alcohol and tobacco in moderation, and to not commit mayhem on one another. **If we could influence a change in life styles to the point of decreasing health costs by only 1% per year, it would save $13,066,200. We pledge to continue our efforts to encourage healthier life styles in our patients and have set as a goal a 1% decrease in the costs resulting from life style related disorders this year.** We plan to utilize the individual physician's office to inform patients of the advantages of proper diet, exercise, and other measures which have proven to be effective in promoting wellness.

The adoption of programs to affect changes in life style are perhaps the most important undertaking our citizens could implement if real cost-savings are to be realized. A recent AMA report noted that nationally, smoking accounts for 350,000 premature deaths each year, 80% of chronic lung disease, 83% of lung cancer in males, 43% of lung cancer in females, 20% of all work days lost, and 150 million excess sick days per year. A 1968 data base, that contains only employed males between the ages of 18 and 65, concluded that the economic loss due to lower productivity from smoking by an average white and non-white smoker was $392 and $548, respectively. Other costs due to smoking, such as increased health and disability insurance payments, premature death, and increased morbidity are not included in this estimate.

Other findings noted that smokers have lower on-the-job productivity. Furthermore, non-smokers indirectly subsidize smokers to the extent that smoking-related illnesses and loss of productivity cause higher medical and disability insurance premiums and thus, depress the wage structure.

Alcohol related problems is another area worthy of pursuing. Nationally, in 1977, there were 464,000 cases of alcoholism in short-stay hospitals alone, over 106,000 cases of cirrhosis of the liver, and 18,000 cases of alcoholic psychosis. The average hospital stay for a case of primary alocholism is eight days, and this accounts for more than 3 million inpatient days per year nationally.

Half of the 53,000 vehicular deaths and one-fourth of the 2 million traffic related injuries in the United States in 1980 were caused by drinking. Some 10,000 young people are made quadraplegics or paraplegics each year as the result of automobile accidents. Traffic accidents are the leading cause of death in young people, most of which are alcohol related.

Falls are second only to vehicular accidents in causing accidental deaths, and cause 60% of total injuries. Half of the fatal falls are caused by drinking, as are half of the deaths from fire, half the drownings, and half the suicides.

A study at the University of Virginia recently determined how much it costs to take care of victims of gun shot wounds and how many of them pay their bills. The study found that about 5% of the gun shot wound victims ever paid bills and the average cost of a gun shot victim is $50,000 per case. While neither doctors nor hospitals are responsible for the increasing numbers of cancers, accidents, burns, gun shot wounds, or other disabilities; they are repeatedly called upon to utilize their knowledge to care for such maladies, and thus generate costs.

Many of the injuries that man inflicts upon himself and his fellow human beings result in situations where extraordinary measures are used successfully to prevent death, but result in people being kept technically alive who have little or no chance of ever having an opportunity of even a partial recovery. Legislation which would define brain death would conceivably have an impact on costs. KMA has had legislation introduced to define brain death, but has been unsuccessful in having legislation passed.

Patient Cost Awareness

KMA feels that patients should become more aware of the cost of medical care at the time it is provided, particularly in cases where the bill is paid by for a third party. Although we have no specific recommendations, it will be helpful for carriers as well as physicians and other providers to assure that the patient is given a copy of the charges for services at the time they are provided. **Cost sharing by the patient at the time a service is provided will certainly help stabilize costs.**

Sometime ago KMA asked members of the Kentucky Hospital Association to periodically furnish attending physicians with copies of their patients' bills, and many hospitals have implemented such programs. We feel it very important for the physicians to be aware of the costs they generate on behalf of their patients, and this program has undoubtedly had a beneficial effect on costs, although the dollar amount is unknown.

Alternate Delivery Systems

There are currently a number of concepts being developed and implemented to pay for care, such as health maintenance organizations, individual practice associations, and preferred provider organizations. The evolution of these programs and the realization of greater competition among the members of the physician community are undoubtedly having effects on medical cost inflation, although that effect is impossible to quantify.

KMA supports a pluralistic medical delivery system as long as those systems are allowed to succeed or fail on their own merit without interference from non-medical sources.

Peer Review

The KMA established one of the first peer review systems in the country in 1968. This system reviewed hospital utilization data as well as questionable physician fees and over the years has resulted in significant savings to Kentucky patients. In the early 1970's KMA helped establish the Kentucky Peer Review Organization, which was required by law to monitor the utilization of federal payment programs. According to the **Kentucky Peer Review Organization, its efforts resulted in a reduction in facility utilization in 1982 which equates to a savings of approximately $5 million.**

Ambulatory Surgery

KMA suggests that reimbursement procedures for in-office surgery also be developed. Technological advances make it possible for many procedures to be done in less expensive settings, including the physician's office. However, because overhead costs of performing many in-office procedures are not covered by many carriers, those procedures continue to be performed in more expensive settings.

There are no accurate estimates available to determine the extent of surgery that could be done safely in

a physician's office. However, if we were to speculate that a quarter of 1% could be saved in the average cost per day of $320.73, an estimated $605,597 a year might be saved in hospital utilization. However, additional costs would be generated in paying for physician office overhead; and added pressure would be placed on the fixed costs of hospitals, which would have to be met from diminishing sources.

Selected Kentucky physicians have been named by the AMA to serve on the Diagnostic and Therapeutic Technology Assessment Project (DATTA). Five hundred physicians/scientists from around the country have been assembled to serve as a resource in examining the safety and effectiveness of medical technologies. This continuing program of technology assessment will be an informational resource for physicians and for the community at large that will contribute to an increased cost effectiveness in the provision of services.

KMA is urging its membership to utilize the AMA's Patient Medication Instruction Program. Instruction sheets have been developed for 20 of the most commonly prescribed medications. The sheets are written in clear and easily understandable language and include only commonly accepted, scientific statements about the drugs.

The PMI program has two objectives, both of which can potentially contribute to the cost effectiveness of medical care. The PMI sheets provide physicians with an easily useable patient education tool. The role of the practicing physician is to decide when, how, and to whom information on prescription drugs should be distributed. PMI sheets facilitate the physicians ability to fulfill that responsibility on a voluntary basis.

PMI sheets have the potential to improve patient compliance with instructions for taking medication by providing patients with the information they require to understand not only the risks but the benefits of particular medications.

Unified Hospital Inspections are recommended: Kentucky hospitals are now inspected and certified by as many as 80 city, county, state, federal, and national agencies on a wide range of subjects. A majority of these are duplicative, many have varying requirements, and all result in a cost to the hospital which is passed on to the payor. KMA suggests that efforts be made to simplify the inspection process. Joint attempts have been made between KMA, the Kentucky Hospital Association, and State government to simplify this cumbersome and costly procedure. Unified hospital inspections have the potential for saving several million dollars in health costs per year in Kentucky, and we urge the appropriate state authorities to work towards a unified hospital inspection.

In the introduction of the "Integrated Health Cost Containment Strategy to Achieve Quality Health Care at an Affordable Cost for Kentucky" report, the Brown Administration cites the rise in health costs during the 30 years between 1950 and 1980. While costs did rise, there was a corresponding improvement in the quality of life of the American people. We feel that any discussion of health costs must be undertaken with an awareness of the improvement in longevity and quality of life which is the result of those expenditures.

According to the 1982 annual report of the Robert Wood Johnson Foundation, in those 30 years...

> "The expectation of life at birth had grown by four years. Overall adjusted death rates had dropped by 20%, and there were reductions in death from 10 of the 15 leading killers. In particular, overall infant and maternal death rates had fallen profoundly, and death rates for black newborns had dropped a dramatic 45%.
>
> Especially reassuring were the decreases in deaths from diseases in which medical care can clearly be life-saving. These included deaths from child birth (down 72% between 1965 and 1980), pneumonia (down 53%), tuberculosis (down 52%), and diabetes (down 31%)."

The Robert Wood Johnson Foundation report goes on to state, "Doctor Jack Hadley of the Urban Institute, in a recent study relates increasing health expenditures to falling mortality. He marshalls figures to show that for every 10% increase in the national health expenditure per capita, there has been a 1.5% drop in U.S. age adjusted mortality."

Hadley's report states further, "Each 1% drop in overall U.S. mortality rates means over 20,000 people are with us each year who would not have been before. This means that people who would have died of certain communicable diseases a number of years ago are living longer, but are now susceptible to degenerative diseases. This fact is reflected in the increased morbidity rate for these diseases. Thus, although life may be substantially prolonged, longevity may be accompanied by severe disability. In addition, those persons suffering from chronic conditions are more susceptible to illnesses, all of which result in increased costs.

Nationally, physicians' services account for approximately 19 cents out of every health care dollar spent.

This is in comparison to hospital care which amounts to approximately 41 cents; nursing home care, which represents approximately 8 cents; 21 cents for all other personal health care; and 11 cents for all other national health care expenditures. The latter two categories, personal health care and other health care expenditures, account for almost as much as hospital care. These expenditures include pharmaceuticals and over-the-counter drugs, eye glasses, hearing aids, corn plasters, transportation, and equipment purchases among other things. Some might argue that personal care items such as over-the-counter drugs and other miscellaneous items should not be considered medical care costs.

According to the Robert Wood Johnson Foundation report, "of each 1,000 Americans, 750 see a doctor each year, but probably are not in any mortal peril, and only six die. Logic suggests that many of the hundreds of others seeing their physicians have been helped and their functional abilities improved or maintained as a result of those medical encounters."

Lastly, the Robert Wood Johnson Foundation report states, "If more health expenditures do result in less morbidity and mortality, reductions in health care expenditures must be made with particular care to avoid having any untoward future effect on the nation's march towards better health care for its citizens."

Health and Safety Tip From the American Medical Association

MARKERS LISTED TO IDENTIFY ALCOHOLICS

How can you tell that a regular, heavy drinker has crossed over the line and become an alcoholic, who no longer can control his or her drinking?

The American Medical Association in its Manual on Alcoholism points to some markers to help identify the alcoholic.

1. Increasing consumption of alcohol, with frequent, perhaps unintended, episodes of intoxication.

2. Drinking to handle problems or relieve symptoms.

3. Obvious preoccupation with alcohol and the frequent need to have a drink.

4. Surreptitious drinking or gulping of drinks.

5. Tendency toward making alibis and weak excuses for drinking.

6. Refusal to concede what is obviously excessive consumption and expressing annoyance when the subject is mentioned.

7. Frequent absenteeism from the job, especially following weekends and holidays.

8. Repeated changes in jobs, particularly if to successively lower levels, or employment in a capacity beneath ability, education and background.

9. Shabby appearance, poor hygiene, and behavior and social adjustment inconsistent with previous levels or expectations.

10. Persistent vague physical complaints without apparent cause, particularly insomnia, stomach upsets, headaches, loss of appetite.

11. Multiple contacts with the health care system with disorders that are alcohol caused or related.

12. Persistent marital and family problems, perhaps with multiple marriages.

13. History of arrests for drunkenness or drunken driving.

Submitted by the KMA Impaired Physicians' Committee

ADATUSS D.C.™ EXPECTORANT

An effective cough suppressant that saves your patients money.

ADATUSS D.C. is a strong documented cough suppressant with just two basic ingredients per teaspoon — 5mg of Hydrocodone and 100mg of Guaifenesin. In addition, ADATUSS D.C. contains a pleasant tasting base of wild black raspberry syrup and offers significant cost savings for your patients. ADATUSS D.C. status permits telephoned prescriptions and authorized refills up to 5 times in 6 months (unless restricted by law).

CONTRAINDICATIONS: Hypersensitivity to Hydrocodone Bitartrate and/or Guaifenesin.

WARNINGS: Hydrocodone Bitartrate can produce drug dependence and tolerance may develop upon repeated use.

Adatuss DC should be prescribed with the same degree of caution appropriate to other oral narcotic containing preparations.

Usage in pregnancy has not been established nor in nursing mothers.

Usage in children also has not been established.

DRUG INTERACTIONS: The CNS depressant effects of Adatuss DC may be addictive with other CNS depressants.

ADVERSE REACTIONS: Occasional drowsiness, dizziness, nausea, vomiting or constipation may be observed.

DOSAGE AND ADMINISTRATION: Adult dose: One teaspoonful (5 ml) after meals and at bedtime as needed.



MASTAR PHARMACEUTICAL CO., INC.
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Merry Christmas

Season's Greetings

Happy Hanukkah

Joy

PEACE

Yuletide Greetings

Happy Holidays

Peace On Earth

THERE ARE MANY WAYS TO SAY IT BUT, MOSTLY, WE WANTED TO SAY "THANKS"!

A.P. LEE AGENCY, INC.

Specialists in group disability programs

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The William Wesley Richmond Memorial Meeting of the Kentucky Medical Association

Ramada Inn/Bluegrass Convention Center
Louisville, Kentucky, September 19-22, 1983

***Digest of Proceedings of the Regular Session of the**

House of Delegates

Peter C. Campbell, Jr., M.D., Louisville
Speaker of the House, Presiding

First Meeting

Speaker Campbell called the first meeting of the 133rd session of the KMA House of Delegates to order at 9:00 a.m. on Monday, September 19, 1983, and asked Albert H. Joslin, M.D., Owensboro, to give the invocation. Following the invocation, R. Gary Marquardt, M.D., Murray, Chairman of the Credentials Committee reported that a quorum was present. A motion was made, seconded, and carried to approve the Minutes of the 1982 Session of the House of Delegates as published in the December 1982 *Journal of the Kentucky Medical Association*.

S. Randolph Scheen, M.D., Louisville, Secretary-Treasurer reported that the scientific sessions would begin at 8:50 a.m. Tuesday in the Convention Center and that the President's Luncheon would begin at 11:50 a.m. on Wednesday at which time the new KMA President would be installed. Doctor Scheen reminded the Delegates that the Nominating Committee for general officers would meet at the close of the first meeting of the House, and Reference Committees would convene at 2:00 p.m. in the Convention Center.

Doctor Scheen read the following list of member physicians who had died since the 1982 session of the House of Delegates. After the reading the members of the House stood for a moment of silent tribute. Names of the physicians are as follows:

Roger D. Akers, Hindman
James E. Albritton, Mayfield
J. S. Bean, Elizabethtown
Marion F. Beard, Louisville
Sam H. Black, Louisville
Charles F. Blankenship, Louisville
George F. Brockman, Greenville
Philip C. Brooks, Hopkinsville,
George A. Buckmaster, Henderson
Naaman H. Burkhead, Louisville
Glynn F. Bushart, Fulton
Harry K. Buttermore, Harlan
William H. Cartmell, Maysville

Editorial Note: A tape recording was made of the two meetings of the House of Delegates, and any member who desires to examine the transcript of these proceedings may visit the Headquarters Office and listen to the recordings.

Henry B. Caudill, Lawrenceburg
Lenore P. Chipman, Williamstown
Gene Norman Combs, Pikeville
Griffin Davis, Paducah
Mitchel B. Denham, Maysville
Howard L. Elliot, Harlan
Clarice R. Faul, Louisville
Anthony R. Giglia, Jr. Newport
J. Bates Henderson, Berea
David Lutha Hill, Louisville
William H. Hosbach, Paducah
Lawrence E. Hurt, Lexington
Avrom M. Isaacs, Louisville
Coleman C. Johnston, Lexington
Robertson O. Joplin, Louisville
Joseph Liebman, Frankfort
Aaron W. Linville, Millersburg
Godfrey G. Maier, Louisville
Ronald O. Naser, Jr, Brandenburg
George O. Nell, Columbia
Richard L. O'Connell, Brandenburg
Stanley S. Parks, Lexington
Horace B. Pendleton, Owensboro
Maurice F. Rabb, Louisville
Darrell E. Rains, Hopkinsville
William C. Roland. Ashland
William F. Rubel, Louisville
James O. H. Simrall, Louisville
William H. Smith, Paducah
Layson B. Swann, Dixon
John T. Tcheng, Ft. Thomas
Morris H. Thompson, Louisville
Darrel L. Vaughn, Morganfield
John H. Walls, Louisville
Carl L. Wheeler, Jr, Georgetown

Glenn U. Dorroh, M.D., Lexington, Chairman of the Rules Committee, presented the following report:

Report of the Rules Committee of the House of Delegates

Because KMA became eligible for an additional Delegate and Alternate to the AMA House of Delegates between sessions of the KMA House, the Board of Trustees appointed individuals to fill these positions until the KMA House could meet and conduct formal elections. This year, the KMA House must routinely elect two Delegates and Alternates, in addition to electing a Delegate and Alternate for the new positions that have come open.

According to the Bylaws, AMA Delegates are elected on a calendar year basis, but their service is required on the basis of the AMA's Association year. Traditionally, the Association has elected Delegates for staggered terms so that all terms did not come to an end at the same time. Because of these situations, **the Rules Committee suggests the following procedures** for election of AMA Delegates and Alternates **this year only**.

Nominations should be made for specific Delegate slots. One slot should be designated for two Delegates who will serve two-year terms; nominations should be made for one slot for two Alternates to serve two-year terms; and nominations should be made for a Delegate and Alternate to serve a term commencing in September, 1983, to run to December 31, 1984.

Chapter 4, Section 4, of the Bylaws states that each position must receive a majority of votes to be elected. If there are more than two nominees for a given position, the nominee receiving the least number of votes on the first ballot should be dropped and balloting shall continue until a majority is achieved.

If there are no more than two nominees for any slot, a simple majority on the first ballot will determine the winner.

Glenn U. Dorroh, M.D.
Chairman

A motion was made, seconded, and carried to adopt the Report of the Rules Committee.

Ellen Sklar, Lexington, Immediate Past President of the Auxiliary, presented AMA-ERF checks comprised of donated funds the Auxiliary had raised to benefit Kentucky's medical schools.

Donald R. Kmetz, M.D., Dean of the University of Louisville School of Medicine, accepted a check for $17,008.78; and Peter P. Bosomworth, M.D. accepted a check for $13,463.98 on behalf of the University of Kentucky College of Medicine.

Dwight L. Blackburn, M.D., KMA President, presented the 1983 Educational Achievement Award to Robert Lich, Jr., M.D., retired Clinical Professor of Urology and Chief of Section at the University of Louisville.

Thomas L. Heavern, Jr., M.D., Vice Speaker, stated the following had been appointed to serve as Tellers for both meetings of the House:

Hand Votes
R. D. Pitman, M.D., Williamsburg
Carl Cooper, Jr., M.D., Bedford
William B. Monnig, M.D., Erlanger
Ballots
C. Kenneth Peters, M.D., Louisville
J. Campbell Cantrill, M.D., Georgetown
Willis McKee, Jr., M.D., Frankfort

Doctor Heavern then introduced the officers who gave their Reports, and he read the list of remaining reports indicating to which Reference Committee each was assigned, as noted below:

Report Number		Reference Committee
1	Report of the President (Presidential Address) Dwight L. Blackburn, Berea	1
2	Report of the President, Auxiliary to KMA Ellen Sklar, Lexington	1
3	Report of the President-Elect James B. Holloway, Jr., Lexington	1
4	Report of the Speaker of the House Peter C. Campbell, Jr., Louisville	1
5	Report of the Chairman, Board of Trustees Richard F. Hench, Lexington	1
6	Report of the Secretary-Treasurer S. Randolph Scheen, Louisville	1
7	Report of the Editor A. Evan Overstreet, Louisville	1
8	Report of the Delegates to AMA David B. Stevens, Lexington	1
9	Report of the Executive Vice President Robert G. Cox, Louisville	1
10	Advisory Committee to AKMA Ballard W. Cassady, Pikeville, Chairman	1
11	Kentucky Medical Insurance Company Board of Directors Ballard W. Cassady, Pikeville, Chairman	1
12	KMA Physicians Services, Inc., Board of Directors Richard F. Hench, Lexington, Chairman	1
13	Scientific Program Committee James A. Baumgarten, Owensboro, Chairman	2
14	Scientific Exhibits Committee Richard A. Kielar, Lexington, Chairman	2
15	Continuing Medical Education Committee Stuart Graves, Jr., Louisville, Chairman	2
16	Cancer Committee P. Raphael Caffrey, Lexington, Chairman	2
17	Hospital Committee Royce E. Dawson, Owensboro, Chairman	2
18	Emergency Medical Care Committee E. Truman Mays, Somerset, Chairman	2
19	Interspecialty Council Paul J. Parks, Bowling Green, Chairman	2
20	Maternal Mortality Study Committee John W. Greene, Lexington, Chairman	3
21	Committee on National Legislative Activities Fred C. Rainey, Elizabethtown, Chairman	3
22	Committee on State Legislative Activities Carl Cooper, Jr., Bedford, Chairman	3
23	Committee on Impaired Physicians David L. Stewart, Louisville, Chairman	3
24	Committee on Long-Term Care Robert E. Smith, Covington	3
25	President, Blue Cross and Blue Shield	4
26	Committee on Medical Insurance and Prepayment Plans Earl P. Oliver, Scottsville, Chairman	4
27	Committee on Claims and Utilization Review K. Thomas Reichard, Louisville, Chairman	4
28	Coordinating Commission on Peer Review Activities Glenn W. Bryant, Louisville, Chairman	4
29	Committee on Health Care Costs Walter I. Hume, Jr., Louisville, Chairman	4
30	Committee to Investigate Changing Trends in Medicine Charles C. Smith, Jr., Louisville, Chairman	4
31	Committee on Maternal and Child Health Van R. Jenkins, Lexington, Chairman	5
32	Committee on Medicare and Other Governmental Medical Programs Paul J. Parks, Bowling Green, Chairman	5
33	Committee on Health Planning Fred A. Stine, Highland Heights	5

34 Technical Advisory Committee on Physician Services 5
(Title XIX)
Harold L. Bushey, Barbourville, Chairman

35 Committee on Community and Rural Health 5
Don R. Stephens, Cynthiana, Chairman

36 Committee on School Health, Physical Education, and Medical Aspects of Sports 5
R. Quin Bailey, M.D., Danville, Chairman

37 Advisory Committee to CHR 5
Richard F. Hench, Lexington, Chairman

38 Judicial Council 6
Glenn W. Bryant, Louisville, Chairman

39 Rural Kentucky Medical Scholarship Fund Board of Directors 6
Henry S. Spalding, Bardstown, Chairman

40 Physician-Attorney Liaison Committee 6
Thomas M. Marshall, M.D., Louisville, Chairman

41 Membership Committee 6
Harold D. Haller, Sr., Louisville, Chairman

42 Placement Services Committee 6
Don E. Cloys, Richmond, Chairman

43 Committee on Constitution and Bylaws 6
Robert L. McClendon, Louisville, Chairman

44 McDowell House Board of Managers 6
Laman A. Gray, Sr., Louisville, Chairman

45 KMA Physicians Financial Services, a Federal Credit Union 1
Dwight L. Blackburn, Berea, President

46 KMA Medical Student Section Governing Council 1
W. Steve Wilson, Louisville, Chairman

Speaker Campbell recognized Janet Hensinger of Lexington, President-Elect of the American Association of Medical Assistants, followed by a break hosted by the Kentucky Chapter of the AAMA.

Doctor Campbell introduced W. Jack Lewis, M.D. of Dayton, Ohio, a member of the AMA Board of Trustees, who discussed the Health Policy Agenda for the American People, which is represented locally by Lee C. Hess, M.D. Doctor Lewis stated he was pleased that Report D of the AMA Council on Medical Service had been disseminated to the House members, and asked the Delegates to give the report careful consideration and express their opinions to Kentucky's AMA Delegation.

David B. Stevens, M.D., Lexington, requested a point of personal privilege to address the House. Doctor Stevens announced that he would not seek reelection as an AMA Delegate, noting that his term would expire on December 31, 1983. He thanked the House members for allowing him to serve for the past 18 years.

New Business

New Business was presented to the House by the Vice Speaker and referred to the Reference Committee indicated:

Resolution	Title	Reference Committee	Submitted by
A	Section on Hospital Medical Staffs	2	Harold L. Bushey, M.D.
B	Vision Retesting for Driver's Licenses	3	John E. Downing, M.D.
C	Medical Consequences of Nuclear War	2	Barry Wainscott, M.D.
D	Collateral Compensation	3	Harlan County Medical Society
E	Legal Disclosure and Informed Consent	3	Harlan County Medical Society
F	Section on Hospital Medical Staffs	2	Campbell-Kenton County Medical Society
G	Abolishment of Punitive Damages in Liability Suits	3	Campbell-Kenton and Boone County Medical Societies
H	Blue Cross and Blue Shield Preadmission Review	1	Jefferson County Medical Societies
I	Automatic Direct Payment of Major Medical Benefits	1	Jefferson County Medical Societies
J	Report D, AMA Council on Medical Services	1	Board of Trustees
K	KMA Physicians Financial Services, a Federal Credit Union	1	Board of Trustees
L	Kentucky Medical Assistance Program	5	Board of Trustees
M	Medicare/Medicaid Hospital Preauthorization Programs	1	Board of Trustees
N	Withdrawal of Support for the Medicaid Program	5	C. Milton Young, III, MD
O	Driving While Under the Influence of Drugs and Alcohol	3	Pennyrile Multi-County Medical Society
P	UCR vs. Indemnity Reimbursement	1	Campbell-Kenton County Medical Society

Q	Medicare/Medicaid Preauthorization Certification Programs	4	Campbell-Kenton County Medical Society
R	Medicare/Medicaid Hospital Preadmission Authorization	4	Calloway County Medical Society
S	Medical Care Access for the Poor	5	Fayette County Medical Society
T	Honoraria for Speakers	2	Fayette County Medical Society
U	Blue Cross and Blue Shield Preauthorization Program	4	Fayette County Medical Society
V	Health Hazards to Ky's Highschool Football Players	5	Board of Trustees
W	Third Party Peer Review	4	Board of Trustees
X	Medical Staff Representation on the Hospital Governing Body	2	McCracken County Medical Society
Y	Medical Staff Self-Government	2	McCracken County Medical Society
Z	Legal Representation for Medical Staffs	2	McCracken County Medical Society
AA	Kentucky Medical Assistance Program	5	Pulaski County Medical Society

Vice Chairman Heavern announced the meeting locations for the Nominating Committee and for Trustee Districts electing Trustees and Alternates. He reminded the Delegates that the Nominating Committee would report at the close of the first scientific session on Tuesday morning.

The names of the members of the Nominating Committee were announced—Cecil D. Martin, M.D., Carrollton, Chairman; John W. McClellan, Jr., M.D., Henderson; Richard S. Miles, M.D., Russell Springs; John D. Noonan, M.D., Paducah; and Preston P. Nunnelley, Jr., M.D., Lexington.

Doctor Heavern also announced that the Speaker and Vice Speaker would meet briefly with new Delegates for an orientation session.

The meeting adjourned at 11:05 a.m.

Second Meeting

Speaker Campbell called the second meeting of the House of Delegates to order at 6:10 p.m. and asked Harold L. Bushey, M.D., Barbourville, to give the Invocation. Doctor Marquardt reported a quorum was present.

Doctor Campbell reported that Thomas L. Heavern, M.D., Vice Speaker of the House, had been hospitalized the previous evening. The House members expressed their concern for Doctor Heavern, and asked Carl Cooper, Jr., M.D., Bedford, to serve as Acting Vice Speaker in Doctor Heavern's stead.

Doctor Scheen recognized guests from neighboring state medical associations who had attended the Annual Meeting. Included were Everett E. Bickers, Jr., M.D. representing the Indiana State Medical Association; S. Baird Pfahl, M.D., President, Ohio State Medical Association; Harold L. Williams, M.D., President, Medical Society of Virginia; Carl R. Adkins, M.D., President, West Virginia State Medical Association; and Robert P. Johnson, M.D., President, Illinois State Medical Association. Special guests who attended the Meeting were W. Jack Lewis, M.D., Dayton, Ohio, member of the AMA Board of Trustees; and Edward R. Annis, M.D., Miami, Florida, past member of the AMA Board.

The Speaker explained that each item on the Consent Calendar would be read individually by the Reference Committee Chairman. If any member wished to question or debate any topic, he could ask that it be removed from the Calendar. If no question was called, it would be taken by consent that all items appearing on the Consent Calendar would be adopted or filed by the House as indicated.

Unfinished Business

Doctor Cooper recognized Richard F. Hench, M.D., Chairman of the Board of Trustees. Doctor Hench made a motion, on behalf of the Board, that J. Campbell Cantrill, M.D., Georgetown, be elected to a four-year term on the KMA Judicial Council. The motion was seconded from the floor and carried.

• Editorial Note: Unless otherwise indicated, the Reference Committee action on each report and Resolution was accepted as printed here. Any opposing action taken is stated in discussion following the item.

REPORT OF REFERENCE COMMITTEE NO. 1

Earl P. Oliver, M.D., Scottsville
Chairman

Reference Committee No. 1 considered the following Reports and Resolution:

1. Report of the President
2. Report of the President, Auxiliary to KMA
3. Report of the President-Elect
4. Report of the Speakers of the House
5. Report of the Chairman, Board of Trustees
6. Report of the Secretary-Treasurer
7. Report of the Editor
8. Report of the Delegates to AMA
9. Report of the Executive Vice President
10. Report of the Advisory Committee to AKMA
11. Report of the Kentucky Medical Insurance Company Board of Directors
12. Report of the KMA Physicians Services, Inc., Board of Directors
43. Report of the Committee on Constitution and Bylaws—Recommendation #1, **only**
45. Report of KMA Physicians Financial Services, A Federal Credit Union
46. Report of the KMA Medical Student Section Governing Council
 Resolution K — KMA Physicians Financial Services, A Federal Credit Union (Board of Trustees)

ITEMS FOR CONSENT

Reference Committee No. 1 reviewed the following items and recommends they be filed as indicated by the consent of the House, without discussion.

3. Report of the President-Elect—filed
4. Report of the Speakers of the House—filed
7. Report of the Editor—filed
8. Report of the Delegates to AMA—filed
10. Report of the Advisory Committee to AKMA—filed
12. Report of the KMA Physicians Services, Inc., Board of Directors—filed

Report of the President-Elect

The system evolved by the Kentucky Medical Association in selecting a President-Elect for a year's activity prior to assuming the responsibility of the Presidency is, indeed, a good one. This has been brought home to me this year, having been away from the inner workings of the Association and the hierarchy for three or four years. The year as President-Elect has been an instructive, informative, and necessary one; one to induce humility. The tremendous job that Doctor Dwight Blackburn, your outgoing President, has done has been remarkable. One has rarely seen a man so dedicated and so effective as Dwight. A year to observe and to formulate thoughts and ideas is a very important, essential one to enable a new President to have a grasp of current events. The Kentucky Medical Association should be congratulated for having formed this system many years ago.

It has been very exciting to watch the growth and development of the Association in the past year. Our Kentucky Medical Insurance Company has increased in stature, experience, and in capitalization.

Our federal credit union, the first based with any state medical association, has been founded and is off to a flying start. It will mean much to members of the Association in years to come.

We are in the process of starting up, at this moment, a computer company which should prove to be an enormous service to the Association. All of these projects have gone without taking "dues dollars" from the society. They will keep the staff and Headquarters Office extremely busy steering them and welding them to purposes that the society wishes.

At the same time, KMA has been faced with enormous problems this year forced upon us by the State administration and Federal bureaucracy. We are facing even greater challenges and problems to maintain our position in the world during the coming year with the withdrawal of Federal and State dollars from the care of the indigent and aged, but at the same time, not withdrawing any directional purpose and control.

In short, this year has been one of great education for your President-Elect; one which has proposed a great challenge. It is with great pride and considerable humility that I am looking forward to the coming year. I shall try to carry forward the admirable steps that past Presidents have taken. Particularly, I shall strive to continue the splendid job that Doctor Dwight Blackburn and staff have set as a marker during the past 12 months.

James B. Holloway, Jr., M.D. President-Elect

Report of the Speakers of the House

Your Speakers look forward to a productive and effective session and anticipate a meaningful exchange of ideas and discussions directed to the operation of the Association.

As was announced, a transition in the positions of Speaker and Vice Speaker has occurred, and we appreciate the confidence the Board of Trustees has displayed in our commitment to serving you. We are devoted to that service and your support of our mutual goals of contribution to the membership.

A rules booklet has been furnished to you in the Delegate's packet. A one-time rule will be required to elect Delegates to the American Medical Association because Kentucky has become eligible for an additional Delegate and Alternate. A procedure for this will be recommended to you at the meeting. Additional rules changes may be voted on during the first meeting of the House.

Termination of the New Delegates' Orientation Session has occurred, as has also been announced, but consultation with your Speakers and Rules Committee members is available following the first meeting of the House. Your Speakers will remain available to you all through the Session for consultation and comment, and we solicit your questions.

We urge your close attention to the reports and resolutions presented, as they represent the work of the Association carried on in your behalf throughout the year. Your actions on this material will direct KMA's work for the coming year.

Peter C. Campbell, Jr., M.D., Speaker, House of Delegates
Thomas L. Heavern, Jr., M.D., Vice Speaker, House of Delegates

Report of the Editor

The *Journal of the Kentucky Medical Association* has continued to undergo purposeful, active changes this year, and involvement with these changes has been rewarding.

The strong interest of readers, as well as the excellent content of the *Journal*, are substantiated by the impressive number of physicians who read the publication regularly, and the number of manuscripts submitted for review, which increased over the last year.

Readership and content quality were quantified this year through a survey, the results of which were published in the April issue. The survey was taken as another ongoing effort to determine readership and to improve the product.

Last year the increased number of submitted articles was so substantial that an expansion of the *Journal* was necessitated. This is most gratifying, as many state medical journals have difficulty meeting monthly scientific page quotas, while other states have done away with the scientific section entirely. Similarly, other sections of the *Journal* have also been expanded, featuring a new book section, a series of articles on practice management, profile articles on organizational leaders, and an expanded organizational news section.

For the second year, and as a special membership service, a membership directory was published in the July issue. The amount of information in the directory this year was much more extensive than last, and serves as a convenient reference for contact of KMA members. Additionally, the directory, which of course contains only names of KMA members, has been furnished as a courtesy to every hospital, chamber of commerce, rotary club, area development district office and others.

A new cover design was introduced with the May issue. This new design graphically incorporates the highlights of the issue's content, and provides a more attractive and varied "first glance" contact.

While new changes have been instituted, it is important that the regular features of the *Journal* not be overlooked. We continue to rely on contributions from the University of Kentucky College of Medicine and the University of Louisville School of Medicine for the "Grand Rounds" section, and on specialty groups for the submission of articles for the section on "Continuing Medical Education."

A "Letter to the Editor"column is also regularly published to afford individual members the opportunity to express their views, which we sincerely solicit.

As Editor, it has been my pleasure to work with diligent and dedicated board members and staff, and I'd like to express my thanks to each of them.

A. Evan Overstreet, M.D. Editor

Report of the Delegates to AMA

Your delegation was increased during the 1982-83 Association year from three to four Delegates and three to four Alternate Delegates. This increased representation was the result of enlarged AMA membership from the increased student

membership. At the December 16, 1982, Board of Trustees meeting, Lee C. Hess, M.D., Florence, Kentucky, was elevated from Alternate to Delegate, and Donald C. Barton, M.D., of Corbin and Frank Pitzer, M.D., of Hopkinsville were appointed Alternate Delegates. They joined Delegates David Stevens, Lexington; Fred Rainey, Elizabethtown; and Harold Haller, Louisville. Remaining as Alternates were Ken Crawford, Louisville and Wally Montgomery of Paducah. This delegation was present at the Interim Meeting in December 1982, in Miami and at the AMA Annual Meeting, June 19-23, in Chicago, Illinois. Doctor Rainey was also honored by elevation to Chairmanship of the Council on Legislation and to Chairmanship of the AMPAC National Board during the Association year.

During the 1983 Annual Meeting in Chicago, the AMA held its elections, and Joe Boyle of California was chosen President-Elect. Harrison Rogers of Atlanta and James P. Davis of Durham, North Carolina were reelected as Speaker and Vice Speaker of the House. The new Trustees elected were George L. Collins, Jr., of New York; John H. Dawson, Seattle; and John J. Ring of Mundelin, Illinois. They joined incumbents reelected Alan R. Nelson, Salt Lake and James S. Todd of New Jersey. A mild surprise was that Robert Kelly of Minnesota and George Mills of Hawaii, incumbents to the Board of Trustees, were defeated for reelection. Selected as Board Chairman at the organizational meeting following the AMA House was John J. Coury, Jr., of Port Huron, Michigan. It has been apparent to most observers that the Board of Trustees has had two factions in the last several years. The faction headed by Joe Boyle and John Coury remains narrowly in control of the Board of Trustees. Kentuckian Joe D. Miller, former Deputy Executive Vice President of the AMA, retired during the year and has moved back to Frankfort, Kentucky. There were no candidates from the KMA for national office during the last year.

Agenda for 1982-83

1. AMA business was highlighted at the Annual Meeting in Chicago by the appearance of President Ronald Reagan. President Reagan extended his congratulations to the AMA for its continued efforts at cost containment, but expressed his alarm about increasing costs and brought the bad news to the Delegates that some Federal controls would soon be in the offing.

2. Other items included on the AMA agenda were recommendations regarding the JCAH principles. The House expressed its strong feeling that the present wording in the standards be maintained and that fully licensed practitioners should remain in the majority and in control of the medical staff. This will be transmitted to the JCAH Commissioners.

3. The dues increase scheduled to be $25.00 for 1984 was reduced to $15.00 because of the strong financial picture of the AMA at this time. Therefore, regular dues in 1984 will be $330.00. Reductions still exist for new physicians, physicians in the military service and physicians in residency training. The AMA's revenues for 1982 exceeded expenses by $11 million allowing the AMA to add to its reserve.

4. The "diagnostic related groups" mechanism for payment of hospital costs was noted as law and therefore a fait accompli. Most Delegates thought this would soon extend to physician services.

5. The Board of Trustees positions for a resident and a medical student were approved by the House. The medical student will be an observer and a nonvoting Trustee.

6. Concurrent with the AMA meeting, the Hospital Medical Staff Section was attended by 640 physicians at its organizational meeting. Strong interest was demonstrated in this area and indicates that this body will provide the AMA House of Delegates with challenging input.

7. A final item of business related to Report D of the Council on Medical Services. This report calls for study by the various component and constituent societies of the AMA. The report crystalizes the failures of the Usual, Customary and Reasonable reimbursement formulae and advocates that the House of Delegates consider adopting a national policy of indemnity payments, only, from third parties. It is the opinion of the Council on Medical Service that this mechanism will thus provide for preservation of physician independence and prohibit control by third parties of physician payments. This information will be extended to the KMA Delegates, and hopefully some expression of opinion can be obtained from them.

This report would be incomplete without my expression of thanks to fellow Delegates Fred Rainey, Harold

Haller, Donald Barton, Frank Pitzer, Lee Hess, Wally Montgomery, and Ken Crawford. All of us join in expressing our thank yous to you, the members of the House of Delegates of the KMA, and to the membership you represent. It would not be possible for the AMA delegation to serve without the expert support of the KMA staff. Our thanks to Bob Cox, Bill Applegate, Bob Klinglesmith, Don Chasteen, Bill Doll and other members of the staff who have served so well. I also want to thank the Auxiliary of the KMA who provided us with help in staffing the delegation headquarters during the meetings.

David B. Stevens, M.D. Senior Delegate

Report of the KMA Advisory Committee to KMA Auxiliary

The KMA Advisory Committee to KMA Auxiliary takes this opportunity to point with pride to the numerous accomplishments of the AKMA. With predictable results, the Kentucky AKMA again set a new record for the AMA/ERF Fund, contributing over $34,000 this past year. Also, the Auxiliary remains the largest contributor to the Ephraim McDowell House, which is owned and operated by the KMA. During the past Association year, several leadership programs have been pursued to get members and leaders more involved.

While the Committee has not researched all the various programs, it does note with pride the heavy involvement of the Auxiliary in the establishment of the "McDonald Houses" in the urban areas. Many programs, both new and ongoing, are held on the local level with little fanfare or recognition.

The Auxiliary is an integral and important part of the Kentucky Medical Association and serves physicians throughout Kentucky in an enthusiastic manner. We would encourage those counties or regions without a chapter to seriously consider the opportunities available to it through the formation of an Auxiliary. We applaud the leadership of Mrs. Ellen Sklar and newly elected Mrs. Mary Veurink for their sacrifices and contributions during the past year. They are extremely dedicated and conscientious individuals, and their tenure is a credit not only to AKMA but to all Kentucky physicians.

Ballard W. Cassady, M.D. Chairman

Report of KMA Physicians Services, Inc.

The organizational meeting of KMA Physicians Services, Inc. was held on April 13, 1983.

KMA Physicians Services, Inc. is the result of action by the House of Delegates in September, 1982, when the Delegates authorized the KMA Board of Trustees "to establish and operate a holding company to be a wholly owned subsidiary of the Kentucky Medical Association and to develop and expand its involvement in services of benefit to the membership, as appropriate." The KMA Executive Committee constitutes the membership of the holding company's Board of Directors.

The KMA Insurance Agency is now the sole company operating under the auspices of KMA Physicians Services, Inc. Before the House of Delegates this year, in the Report of the Chairman, Board of Trustees (Report No. 5), is a recommendation for the formation of a computer services company to further serve the needs of our membership. If this becomes a reality, the computer company will become the second major operation of your holding company, KMA Physicians Services, Inc.

Certainly as time passes we anticipate the possible formation of additional corporations to provide more services to the membership.

We feel the House of Delegates acted wisely in authorizing our holding company last year, as we feel the membership of KMA can now profit from many additional benefits not previously available to us. Your Board of Directors promises its continuing efforts in overseeing the acitivity of our holding company and its operations.

The following is the report of the KMA Insurance Agency:

KMA Insurance Agency, Inc.

In September 1978, the Kentucky Medical Association organized the KMA Insurance Agency, Inc. with the goal of providing Kentucky physicians a marketplace for their primary insurance protection needs. During the past year, the Agency has continued to offer insurance programs tailored specifically to the wants and needs of physicians. Programs are available for homeowners, automobiles, office protection and disability income, as well as various life insurance plans such as group term, the Universal Life Policy and other individual life insurance products.

The two full-time KMA insurance agents, Tim Doyle and Bob Proffitt, are available to assist Kentucky phy-

sicians in taking care of their insurance needs, as well as providing an avenue through other professional representatives in specialized areas to handle any insurance need. Several agents strategically located throughout the state have been selected by the Agency to provide the Kentucky Medical Association membership with life insurance planning services which are sponsored and approved by the KMA. Through the newly organized American Physicians Life, the Agency now has a company which specializes in life insurance programs which have been designed for the physician exclusively. The Agency also provides the higher limits protection to approximately 75% of KMIC's professional liability insurance policyholders.

The Agency has shown tremendous growth in comparison to 1982 figures, with an increase of 68% in commission and 61% in premium. To give the best possible service to our policyholders, the Agency provides a professional in-house staff of Brenda Emerson and Janet Bates to handle the day-to-day tasks of issuing and maintaining your policies. As the Agency has grown in products offered, sales volume and staff, it has also expanded its office space to include an additional 5,000 square feet which is shared with KMIC and the newly formed credit union, KMA Physicians Financial Services. The Agency was also instrumental in helping the credit union get on its feet.

Under the guidance of Robert G. Cox, Executive Vice President of KMA, serving as President of the Agency; and Morton C. Bell, Executive Vice President; the Agency will continue to provide quality products and service to Kentucky physicians by helping them meet their various insurance needs. Their continued success is ultimately due to the interest and support received from you—the Kentucky physician.

Dwight L. Blackburn, M.D. Chairman

In concluding our report, we want to remind the membership that the Kentucky Medical Association is the sole owner of KMA Physicians Services, Inc., and through that entity, KMA is the sole owner of the KMA Insurance Agency, Inc.

KMA PHYSICIANS SERVICES, INC.
BOARD OF DIRECTORS
Richard F. Hench, M.D. Chairman

End of Consent Calender Items

Report of the President

In many respects, this has been a rewarding year for both me, personally, and for the Association. The men and women in leadership positions who have helped shape and implement policy have done a remarkable job in the face of terrific pressures. We have not always been successful, but we have attempted to do what is right and what is best for our members and our patients.

At your direction and approval, a new 10,000 square foot addition to KMA Headquarters has been completed and is now occupied without spending any dues income. The new addition was financed and constructed by your KMA Insurance Agency. The debt on the building will be retired in 10 years, and at that point, the entire property will revert back to the Association and increase its assets considerably.

KMA's Physicians Financial Services, a Federal Credit Union, has been organized and is in business. The success and growth of this institution is phenomenal. I understand the KMA credit union now has over $2 million in assets and can provide KMA members, their families and employees practically all financial services. You will be pleasantly surprised at the interest rates, investment returns, and various other capabilities of **your** financial institution.

KMIC continues its strong growth and now is the number one carrier of physician professional liability insurance in Kentucky. The excellent development of KMIC and the KMA Insurance Agency reflects the confidence and support of Kentucky physicians, who saw a problem and solved it with their own initiative and hard work.

Through these groups there are other opportunities available by which we can augment dues income; and in the process, reward those physicians who support and participate in organized medicine. The Board of Trustees and various committees continue to research and study feasible programs, and the House will be considering some of these proposals during the meeting.

The success of the Association in meeting the membership's professional and individual needs has been dampened considerably by an overwhelming concern about the cost of medical care. Frustration and soul searching have characterized those who have realistically and humanely sought to find solutions to the medical cost dilemma. Unfortunately, the very people and institutions who helped create the cost problem now seek to dismantle the present health care system. In

practically every instance, their predictions, formulas and experiments aimed at solving the crisis have generated a continuing upward spiral in health costs. They choose to ignore positive and unpresedented mortality and morbidity statistics and instead search for scapegoats to deflect attention from their own miscalculations.

Bureaucrats and politicians denounce the expenditure of 10.5% of the gross national product on medical care, but ignore the fact that practically every industrialized western society, with the exception of the United Kingdom, have expenditures which equal or exceed this figure. Underfinanced health programs, inflation, advances in technology, and the burgeoning size of the elderly population have all played a part in economic growth in health care, which can no longer be sustained in our current fiscal environment. This brings about difficult choices for the American public.

Nationally, diagnostic related groups (DRGs), which were enacted under the 1982 TEFRA legislation, will be operational October 1, 1983. It appears that DRGs will have a significant impact upon the cost of hospital care, and hospital management will require considerable cooperation from medical staffs. Additionally, there is a provision under TEFRA to reimburse physicians using the DRG concept and a provisional requirement for physicians to accept Medicare reimbursement as payment in full. These are just two examples of the Reagan Administration's attempt to contain costs. As you are aware, President Reagan announced at the AMA Annual Meeting that no update in Medicare fees would occur this fiscal year.

In Kentucky, the new three-year State Health Plan has been approved by the State Health Planning Council and signed by the Governor. Few documents have more potential for harm and long-term disastrous effect than does this Plan. We have achieved tremendous results in our State, and in several areas Kentucky provides unique care unavailable in many other states. We have done the job economically and with expertise, so that Kentucky ranks at or near the bottom in hospital and physician charges across the nation.

Tragically, the present State Administration and a small group of misguided transients have embarked on a plan to destroy many of the progressive steps taken in this Commonwealth over the last 30 years. The State Health Plan essentially calls for a two-tiered health care delivery system, one for the rich and one for the poor. It also calls for a system which would eventually deprive rural and small communities of equal access to health care. It proposes that nonphysician personnel provide the front line of medical care, particularly for the poor, the elderly, State employees and the rural population. It calls for the dismantling of the Kentucky Rural Medical Scholarship Fund and increases bureaucratic meddling into the educational structures of our two fine medical schools.

Due to restrictions placed on the availability of quality care, communities in Kentucky with a potential for growth will find the doors slammed in their faces by industry. If all components of the State Health Plan are set in place, your ability to function professionally and economically will be placed in great jeopardy.

Fortunately, the light at the end of the tunnel is not an approaching train but the daylight of a new State Administration. After reviewing campaign statements of the Gubernatorial candidates and some of their past positions, I note both major candidates perceive health care not just as a matter of dollars and cents, but as one involving compassion and caring for those most desperately in need, the poor and the elderly.

In January 1984, another major opportunity to right the course onto which this Administration has strayed will present itself. Many components of the State Health Plan will require the approval of the 1984 Kentucky General Assembly. The upcoming Gubernatorial election and the 1984 Kentucky General Assembly will present the most crucial tests to face Kentucky physicians and the delivery of health care in our history.

If you carefully review the State Health Plan and consider legislation proposed by various nonphysician groups, it become obvious that we must act, and act now. If you don't know your State Representative and State Senator, I would encourage you to take steps to get to know them today. Your KMA staff will be more than happy to furnish names, addresses, and phone numbers. While letters to members of the General Assembly serve a useful purpose, personal, upfront, and one-on-one contacts are crucial to our success. Historically, KMA Key Men have done a remarkable job, but they can't continue to carry the entire load.

Like many of you, I have sat and listened to our Legislative and KEMPAC Chairmen urge members to action. Yet, less than 15% of physicians in Kentucky now participate in KEMPAC. Tragically, less than 8% of Kentucky physicians are sustaining members of organized medicine's political arm! An even smaller percentage bother to take the time to get to know the members of the Kentucky General Assembly. It is quite apparent that a few physicians can no longer carry the

load for the entire profession. Believe me, time is not on our side, and only through concerted and diligent effort can we preserve the system of health care which the whole world perceives as the standard for excellence.

In closing, let me remind you of the need for this profession to actively seek to control health costs. We must moderate our fees and carefully monitor our hospital admissions and lengths of stay. We must continue to provide necessary medical care to unemployed patients and their families, regardless of their ability to pay. This is in the highest tradition of Kentucky physicians, and we should strongly commit ourselves to this service. The preservation of the dignity of those who are unemployed is vital in these difficult times, and in the long run, will assist our profession and its public image.

We must have your support in these areas if we are to be effective in presenting medicine's position on matters relating to the delivery of health care. If we fail to present a strong and united front, we can easily become an outside party barred from participation in the decisions which affect our profession, and more importantly, our patients.

The fact that a national Republican Administration, which authorized DRGs, and a relatively conservative Democratic State Administration are both moving in similar directions cuts across political lines and signals a cohesiveness and determination to do something in the area of health costs—even if it is wrong. These are critical times, and the situation we find ourselves in demands our undivided attention and perseverance.

Let me conclude by thanking each of you for the opportunity to serve this profession and organization. We have sought through every channel to represent you and to insure that quality care is delivered to our patients. As we review the past year, the road has been rocky and occasionally we've taken our lumps. Despite the roadblocks and criticisms of our detractors, the Association has maintained its integrity and belief in a fair and equitable health care delivery system. We will not shirk our responsibilities to our patients and our profession and will continue vigorously to seek changes in those areas where government has acted unilaterally.

In a few hours, Doctor Holloway will assume the office of President of KMA. Enormous difficulties and decisions face him at the very outset. More than anything else, he will need your support and your commitment to stand with him. I pledge to him my assistance and my utmost support, and urge every member of this organization to join with Jim in preserving and strengthening the greatest and most noble profession in the world.

I am grateful to you for allowing me to serve and for your support and understanding. Dot and I have enjoyed your friendship and concern over the year and will treasure it all the days of our lives.

Dwight L. Blackburn, M.D. President

Recommendations, Reference Committee No. 1:

Reference Committee No. 1 reviewed the Report of the President and wishes to thank and congratulate Doctor Blackburn for his efforts and the time well spent in his duties. The Committee especially commends Doctor Blackburn for his astute assessment of the state of medicine as it exists today. The Committee recommends that this report be filed.

Report of the President, Auxiliary to KMA

In September of 1983, the Auxiliary to the Kentucky Medical Association will have been in existence for 60 years. Many changes have been made in the Auxiliary since its organization at Crab Orchard Springs in 1923; however, the principle objective has not changed. The gender of the membership is no longer totally female. In addition, a portion of the membership is engaged in the same or a different profession, or has a full or part-time position. As it pertains to the Auxiliary, the words "woman," "she," and "wife" have been deleted from our vocabulary. We are no longer a social organization and our goals are far reaching. We will continue to change as needs dictate. We must keep pace with time; not to change with the times is to become stagnant, and stagnation leads to the demise of an organization.

The State Leadership Conference held in Elizabethtown had a new look with the addition of round table discussions on the "Basics of Auxiliary" added to the format. Mr. George Logan, Program Manager at the Kentucky Department of Education, presented a program on "Bicycle Safety," and Doctor Herman Bush, Chairman of Health Education at Eastern Kentucky University, spoke on "Comprehensive School Health for Kentucky Schools." Legislation as it pertains to physicians and spouses was also discussed.

McDowell House Day, held in October, gave members a chance to view the renovation and refurbishing that has been accomplished at the home of Doctor

Ephraim McDowell in the last four years. An inventory of items in the house, which was recently completed, places a value of $245,000 on antiques donated by the Auxiliary. During the year 1982-1983, auxilians donated $16,237.11 to the McDowell Refurbishing Fund. This fund allows the Board of Managers to purchase period furniture and furnishings to replace or add to that already in the house. The house is in excellent repair, beautifully maintained, and is loved by all who work there. Special thanks to the KMA Board of Trustees for approving two additional Auxiliary members to the Ephraim McDowell Board of Managers. We do appreciate the vote of confidence.

A 19-page revision of the AKMA's Bylaws was adopted at the 61st Annual Convention held in April. This complete revision was made to align our Bylaws with that of the national organization's Bylaws. The revisions were also made to allow for structural change of the Auxiliary Board and to make the Bylaws clear, concise, and current. All pages and lines are now numbered to make them more readible. A **written** "List of Policies," compiled to keep members informed, was completed.

The tax exempt status of the organization was recognized by the State of Kentucky. This permits the Auxiliary to have a purchase exemption and to be paid a percentage for collecting state taxes at fund-raising events.

The 61st Annual Convention was held at the Lexington Radisson in April. For the first time, a registration fee was charged. Topic seminars were added to the necessary convention business in the hope that a portion of these topics would become potential community action programs. The faculty was composed of volunteer professionals. Mr. Larry Roberts, Commonwealth Attorney, presented "Substance Abuse;" Doctor Otto Kaak of Lexington made us aware of "Child Abuse" and how to recognize the problem; Ms. Ann Aaron, as attorney from Louisville whose practice places emphasis on estate planning, presented "Estate Planning—Ways to Protect What You've Worked For;" and finally, Courier-Journal Reporter, Ms. Marie Bradby, defined "What's News" and how best to publicize the work of the Auxiliary.

The seminars were held in the morning; an AMA-ERF auction was held during the luncheon; the House of Delegates met in the afternoon; and a banquet was held in the evening.

Mrs. John Bates, President of the American Medical Association's Auxiliary, installed the 1983-1984 officers. A special program was presented to honor the state's past presidents. Honorary memberships and Awards of Recognition were bestowed for the first time on Mrs. John Marcum Blades, President, 1940-1941; Mrs. John S. Harter, President, 1951-1952; Mrs. Earl W. Roles, President, 1960-1961; and Mrs. J. Murry Kinsman, President, 1963-1964. In addition to the many contributions by the named presidents, Mrs. Blades has been a member for over 50 years. Doctor Dwight L. Blackburn, President of the KMA, honored the Auxiliary with his presence.

The Auxiliary raised over $34,000 for the AMA-ERF during the 1982-1983 year. Boyd County deserves special thanks for the contribution of $9,259, or $126.83 per member.

The Loan Fund of the Auxiliary awarded $3,600 to students interested in allied health careers in 1982-1983.

The following is a list of a variety of Health Programs which have been initiated by component auxiliaries or in coalition with other organizations:

1. Purchase and loan of infant/child auto restraints;
2. Health screening for children and/or adults in schools or at fairs;
3. Body recall exercises in nursing homes;
4. Bicycle safety programs in schools;
5. Loan closets for wheelchairs, crutches, hospital beds, etc. for those unable to afford the rental fee;
6. Loans and scholarships in ten county auxiliaries for students interested in health careers; and
7. Hospice training programs.

To this add active involvement in school boards to aid in the proper selection of material for health education. The list is endless. I would like to mention that the Fayette County Auxiliary has donated over $12,000 to the Lexington Ronald McDonald House. Hopefully, ground will be broken soon at the site leased from the University of Kentucky.

Lastly, the history of the Auxiliary was brought up-to-date by a group of Auxiliary members from Louisville. The members compiled this valuable information and placed the history of the Auxiliary for the last 10 years into a booklet.

The year has been productive, challenging and many changes were made in the Auxiliary. My only disappointment is the drop in membership and the fragmentation of membership in two counties. Total membership is so important to a state; without this, we are not represented on the national level.

It has been my privilege to serve the Auxiliary. My year has been rewarding, educational, and challenging. Kentucky is a beautiful state and the thousands of miles I have driven this past year made me even more aware of this fact. Each region is unique! I want to extend my thanks to the KMA executive staff for the many courtesies they extended to me. I deeply appreciate all of them and thank all who made 1982-1983 a successful year.

Ellen C. Sklar President

Recommendations, Reference Committee No. 1:

Reference Committee No. 1 reviewed the Report of the President. Auxiliary to KMA and commends the President and the Auxiliary for their varied activities and fund raising. The Committee recommends this report be filed.

Report of the Chairman, Board of Trustees

It is a pleasure to submit this report on my second year as Chairman of the Board of Trustees. I would first like to thank the members of the Board. the committee chairmen, the committee members, and the Delegates of the House for the time, interest, and energy which they have devoted to Kentucky medicine during this year. If our profession is to survive the internal and external stresses which seem to be increasing each year, it will be through the efforts of people like you who are willing to make the commitment to our profession and our patients.

KMA has had a busy year. and the activities of your Board have been outlined in detail later in this report in the summary of each meeting. I would like to stress a few items.

The holding company, authorized by the House of Delegates at the 1982 meetings. is now a reality. The KMA Physicians Services. Inc. is a wholly owned subsidiary of KMA. This holding company owns the KMA Insurance Agency, Inc. and will also own the computer company if the House of Delegates authorizes it.

The House of Delegates in 1982 directed the Board to study the feasibility of the financial institution for members of KMA and to proceed with implementation if the Board found it advisable. The KMA Physicians Financial Services, Inc.. a Federal Credit Union. is now operating with assets over $1.5 million and nearly a million dollars in loans to our members. We can take some pride in the fact that Kentucky is the first state medical society with a full service credit union.

A recommendation that a computer consulting company be set up to serve our members will be coming before you at this meeting. I would ask that you read the report of the Ad Hoc Committee on Computer Services contained within this report, and that you give it careful consideration.

These activities are only a small part of the year's work by your Board and its committees. I believe these things. plus the multitude of activities listed throughout the rest of this report. indicate that KMA is a vigorous, growing organization representing and serving its members. It is especially heartening to me to see our organization providing these complex and valuable services to our members without detracting or interfering with KMA's primary goals, which are representing Kentucky medicine and maintaining and improving the quality and integrity of the medical care of our patients.

The cost of medical care continues to be the prime problem of medicine today. and you can see from the various reports to the House of Delegates how this has dominated the year's activities and consumed more time and energy than any other item.

Even though this was not a legislative year, KMA officers and staff spent considerable time before legislative committees and various departments, such as the Cabinet for Human Resources. We can expect a tough session in Frankfort in 1984, and we are preparing for it.

The KMA staff. under Executive Vice President Robert G. Cox, continues to maintain a level of excellence unmatched by any staff with which I have ever been associated. They make a difficult job much easier.

The following summary of Board meetings will give you an idea of the number and scope of issues considered by your Board. Complete minutes of the Board and Executive Committee meetings will be provided to Reference Committee No. 1.

Each year a report on the Legal Trust Fund is included in the Chairman's report. During this last year $44,339.56 was paid out of the Fund. At the present time, there is $44,334.72 in the Fund.

SUMMARY OF BOARD MEETINGS

First Meeting, September 23, 1982

Acting as Temporary Chairman, KMA Secretary-Treasurer S. Randolph Scheen, M.D., introduced the newly elected members of the Board of Trustees and the new officers: James B. Holloway, Jr., M.D., Lexington. President-Elect: Charles C. Smith, Jr., M.D.,

Louisville, Vice President; Albert H. Joslin, M.D., Owensboro, Trustee, Second District; R. Kendall Brown, M.D., Georgetown, Trustee, Ninth District; and Garner E. Robinson, M.D., Ashland, Trustee, Thirteenth District.

The Board then elected the Executive Committee members to serve with the President, President-Elect, Vice President, and Secretary-Treasurer for the 1982-83 Associational year. Richard F. Hench, M.D., Lexington, was appointed Chairman of the Board for a second term, and Donald C. Barton, M.D., Corbin, was named Vice Chairman. Robert E. Smith, M.D., Covington, and Wally O. Montgomery, M.D., Paducah, were also named to the Executive Committee as Trustees-at-Large.

Thomas L. Heavern, Jr., M.D., Highland Heights, was appointed Parliamentarian for a one-year term. The following were reappointed to the KMA Insurance Agency, Inc., Board of Directors: Dwight L. Blackburn, M.D., Berea; Ballard W. Cassady, M.D., Pikeville; Richard F. Hench, MD., Lexington; James B. Holloway, Jr., M.D., Lexington; S. Randolph Scheen, M.D., Louisville; Robert G. Cox, Louisville; Carl L. Wedekind, Jr., Louisville; and Morton C. Bell, Louisville.

The Board reviewed the Executive Committee's recommendations for committee personnel, made appropriate changes and additions, and then approved the committee membership for the 1982-1983 Associational year.

A decision was made to hold the 1983 KMA Annual Meeting at the Ramada Inn/Bluegrass Convention Center in Louisville, with the scientific sessions beginning on September 20.

The next meeting was set for December 15-16, 1982, in Louisville.

Second Meeting, December 15-16, 1982

The KMA Board of Trustees met in regular session at the KMA Headquarters Office on December 15-16, 1982. Reports were made by the President, Secretary-Treasurer, Senior Delegate to the AMA, Secretary of the State Board of Medical Licensure, Commissioner for Health Services, and the KPRO President.

Highlights of Board action taken at the meeting include:

- Appointment of a Committee to Study Changing Trends in Medicine.
- Endorsement of the concept of the KMA Judicial Council serving as a subcommittee of the State Board of Medical Licensure.
- Recommendation that Lee C. Hess, M.D., Florence, be named as KMA's representative on an AMA Advisory Committee on National Health Policy.
- Authorization to file Articles of Incorporation for KMA Physicians Services, Inc. (a holding company).
- Authorization to file an application for KMA Physicians Financial Services, a Federal Credit Union; to invest $100,000; and to loan an additional $100,000 to the credit union for operating expenses.
- Nominations to AMA Councils: AMA Council on Legislation—Fred C. Rainey, M.D., Elizabethtown; AMA Council on Long-Range Planning—David B. Stevens, M.D., Lexington; and AMA Council for Graduate Medical Education—D. Kay Clawson, M.D., Lexington.
- Appointment of Lee C. Hess, M.D., Florence, as KMA's fourth Delegate to the AMA; and appointment of Donald C. Barton, M.D., Corbin, and Frank R. Pitzer, M.D., Hopkinsville, as Alternate Delegates to the AMA.
- Adoption of a policy statement regarding legal advertising in the *Journal of the Kentucky Medical Association*.

The Board members also heard reports on the Kentucky Medical Insurance Company; the KMA Insurance Agency, Inc.; the Citicare Program; and a special presentation by a member of the KMA Committee on Impaired Physicians.

Thomas D. Stroud, Vice President of Kentucky Blue Cross and Blue Shield, presented rate renewel information for the KMA-endorsed Blue Cross/Blue Shield/Major Medical group plan for KMA members, and the Board selected one of three options offered. The Board members also approved recommendations of the Committee on Medical Insurance and Prepayment Plans to express concern to the Governor regarding the state employees' group plan, pointing out the possible lowering of the quality of medical care as a result of the contract negotiated.

The Board also requested additional information regarding the extent of physician participation on the Governor's Coalition of Payors to Address Health Care Costs.

The next meeting was set for April 13-14, 1983, at the KMA Headquarters Office in Louisville.

Third Meeting, April 13-14, 1983

The KMA Board of Trustees met in regular session at the KMA Headquarters Office on April 13-14, 1983. The Board accepted reports of the President; Auxiliary President; Secretary-Treasurer; Secretary, State Board of Medical Licensure; Senior Delegate to AMA; KPRO President; and Commissioner for Health Services.

The Board approved the proposed Budget for the 1982-83 fiscal year, and asked the Committee on Constitution and Bylaws to propose a Bylaw change elevating annual dues for regular active members.

The Board empowered the Executive Committee to formulate a document in answer to Governor Brown's proposals for health care cost containment in Kentucky, and to set up a KMA computer services company if results of a market survey are positive.

Also approved was a stock exchange between the KMA Insurance Agency, Inc. and KMA Physicians Services, Inc. (a holding company), which would effect KMA ownership of the holding company, which in turn would own the Agency.

The Board also approved loans to KMA Physicians Financial Services, Inc., a Federal Credit Union, for up to two years, to be shared by the Kentucky Medical Insurance Company and the KMA Insurance Agency, Inc.

In other action, the Committee on Medical Insurance and Prepayment Plans was charged with monitoring a pilot pre-authorization program that Blue Cross and Blue Shield has instituted on a limited basis, and adopted recommendations of the Hospital Committee regarding JCAH Proposals on Medical Staffs and Hepatitis-B Vaccinations. The Committee on Impaired Physicians was granted authority to seek assistance from KMA members not serving on the Committee who may be instrumental in carrying out the Committee's functions.

The Board endorsed the Executive Committee's appointment of J. Campbell Cantrill, M.D., Georgetown, to the Judicial Council to fill an unexpired term, and appointed Thomas L. Heavern, Jr., M.D., Highland Heights, as Vice Speaker, House of Delegates, to fill the unexpired term of Peter C. Campbell, M.D., Louisville, who was elevated to Speaker following the resignation of Bennett L. Crowder, M.D., from that position.

Walter I. Hume, Jr., M.D., Louisville, was appointed as KMA's representative on the Kentucky Health Costs Coalition; funds were allocated for dues on the Coalition; and authorization for payment of expenses was given for KMA sponsorship of a speaker on a symposium the Coalition is planning.

The Board authorized expenses for a member of the Committee on School Health to attend an AMA meeting regarding the National Committee on the Child, and scheduled a Practice Management Workshop on "Marketing Strategies for Private Practice" on November 10, 1983, in Owensboro.

The next meeting of the KMA Board was called for August 10-11, 1983.

Fourth Meeting, August 10-11, 1983

The KMA Board of Trustees met in regular session on Wednesday and Thursday, August 10-11, at the KMA Headquarters Office in Louisville. A primary purpose of the August meeting is to review the reports of the committees to be presented to the House of Delegates, which was accomplished along with Board recommendations.

The Board heard reports of the President; Secretary-Treasurer; Auxiliary President; KPRO President-Elect; Senior Delegate to the AMA; Assistant Secretary, State Board of Medical Licensure; and Commissioner for Health Services.

The Trustees then accepted informational reports regarding the Kentucky Health Costs Coalition, the State Health Plan, and President Blackburn's Patient Awareness Program.

The Board acknowledged with grateful appreciation the years of service Frank M. Gaines, M.D. has given to the State Board of Medical Licensure, and directed that appropriate recognition be given to him.

Nominees were then selected to submit to the Governor for the Board of Medical Licensure and the Hemophilia Advisory Committee, and the current *Journal* Editorial Board was reappointed for an additional two-year term.

In other action, the Board adopted a lease agreement between the Kentucky Medical Association and the Kentucky Medical Insurance Company; requested a hearing on regulations dealing with Medical Assistance payments; and tentatively agreed, pending further study, to authorize funds from the Legal Trust Fund to help defray expenses in the Falls City Medical Society's suit against Citicare.

The Board members reviewed the Report of the Ad Hoc Committee on Computer Services, and endorsed the Executive Committee's recommendation that the Board cautiously pursue the establishment of a Com-

puter Services Company. The Board further authorized KMA Physicians Services, Inc. to make an initial loan to the new company, if its establishment is endorsed by the KMA House of Delegates.

The next meeting of the Board was set for Sunday, September 18, 1983.

EXECUTIVE COMMITTEE

The Executive Committee is elected by the Board of Trustees and consists of four Trustees (two of whom serve as Chairman and Vice Chairman), the President, President-Elect, Vice President and Secretary-Treasurer. The Executive Committee conducts the Association's business on a day-to-day basis and acts for the Board of Trustees between sessions of the Board. Eight meetings were held this year on matters requiring the attention and action of the Executive Committee. This is an extremely hard working group who devote many days a year to the Association's affairs.

Additionally, four of these members serve as the Quick Action Committee who are "on call" and meet frequently, sometimes by telephone, to make decisions of an urgent nature. They are the President, President-Elect, Chairman of the Board and Secretary-Treasurer. During legislative years, this group meets weekly during the Kentucky General Assembly to oversee our legislative program.

BUDGET COMMITTEE - DUES INCREASE

The Budget Committee held its meeting in March to prepare the Budget for the 1983-84 fiscal year. The Committee recommends a dues increase from $225 annually to $300 annually, effective January 1, 1984. This recommendation received the unanimous support of the Executive Committee and the Board of Trustees. The Board of Trustees presents this proposal to the House of Delegates with a recommendation of approval.

For a number of years, reports to the House of Delegates have indicated that a dues increase would probably be required the following year. That year has now arrived, and it would be fiscally irresponsible if your Board did not recommend it strongly at this time. Since the Association has gone so long (longer than any other state medical association) without an increase, it doesn't seem indicated to formalize a lengthy report with charts and graphs. However, a reminder in summary form of the following might be in order.

1. Five-Year Dues Schedule - Our last dues increase, voted in September **1975**, was designed to last only five years with a 5% annual inflation rate anticipated. Inflation has been much greater, yet the Association has managed to stretch its five-year dues schedule until now, a period of **eight years, with no dues adjustment**. Three extra years with no increase is not insignificant.

2. Consumer Price Index - During the eight years since our last dues increase, the CPI has increased approximately **65%**. Looking at the increased costs in operating our own practices since 1975, it becomes rather obvious that a dues increase would be sorely needed, with some bewilderment at how it could be delayed this long. If our dues were automatically adjusted these past eight years to the CPI (which incidentally is done elsewhere) our dues today would be in excess of $400.

3. Increased Association Programs - During the past eight years, the House of Delegates has increased the scope of the Association's services on numerous occasions without generating any new income to fund them. Maintenance of these services is essential. They include such matters as operation of a Frankfort Legislative Office, a Specialty Services Department, increased legal assistance, increased legislative and bureaucratic monitoring, increased (almost daily) preparation and delivery of testimony on governmental matters, computerization of KMA, dramatic increases in seminars, workshops, Recruitment Fair, committee activity, etc.

4. New Organizations - At the direction of the House of Delegates, KMA has organized some most successful affiliate and subsidiary organizations; *ie*, the Kentucky Medical Insurance Company, KMA Insurance Agency, KMA Physicians Services, Inc., and this year, the KMA Physicians Financial Services, a Federal Credit Union. These organizations have not only **not** been a financial burden for KMA, but have in fact been of much assistance in the Association being able to delay a dues increase until this time. They have all proven to be a valuable asset to the membership and to KMA as an organization.

5. Reserve Fund - The Association Reserve Fund is less than our goal of one year's operating expenses. Additionally, the Reserve Fund generates the equivalent of approximately $50 per member annually. To let it drop to a lower level escalates the amount of dues increase needed to balance our budget. This we cannot afford to do, as the current Budget anticipates expenses totaling $236,953 more than anticipated income.

6. The Amount - A seventy-five dollar dues increase amounts to less than $10 per year (before tax deduction) since our last increase. A pro forma review indicates

that even with this increase, our budget will soon be in the red again. An increase of a lesser amount or a delay would be hazardous to the Association's ability to properly function on behalf of the membership. As previously stated, your Budget Committee and Board of Trustees unanimously recommend this increase to you.

Ad Hoc Committee on the KMA Headquarters Building

The Ad Hoc Committee on the KMA Headquarters Building spent much time during the Association year overseeing the construction of a 10,000 square foot addition to the Headquarters Office Building. The composition of the committee was a representative mixture of KMA and the KMA Insurance Agency.

The building addition was the financial responsibility of the Insurance Agency and funds were made available through an industrial revenue bond. Building the new addition was completed at no cost to KMA. The Association sold a portion of its land, as authorized by the House of Delegates last year, so the Agency could own the land on which the addition stands. Proceeds from the land sale provided funds for KMA to purchase needed office equipment and to proceed with some renovation of the original building, which had been in need of repair for some time.

We are pleased to report that the Association, with the Agency's addition, has an outstanding facility of which we can all be proud. We invite the Delegates and the membership to visit your Headquarters Building whenever the opportunity presents itself.

Members of the Building Committee were: S. Randolph Scheen, M.D., Louisville, Chairman; Dwight L. Blackburn, M.D., Berea; Ballard W. Cassady, M.D., Pikeville; Robert G. Cox, Louisville; and Carl L. Wedekind, Jr., Louisville.

Report of Ad Hoc Committee on Computer Services

Our society is now caught up in the computer revolution. Every segment of society is affected by some form of automation, and every day a new type of device or computer is produced to increase productivity and assist us with our thirst and quest for knowledge and information.

Due to the cost, only the hospital-based physicians and large clinics sought to computerize their practices in the past. With the advent of the micro computer and the cost reduction in the mini computer, a physician is now able to automate his office and increase his efficiency without major expense. It is no longer a question of whether a physician buys a computer or not, but when. Computers are fast becoming the newest form of communication. With electronic mail becoming the future postal delivery service, and the need to access vast amounts of information promptly to carry out our basic tasks, it will be necessary for physicians to enter into the computer market.

Physicians are entering a competitive market and the services that can be provided by automation will become an important aspect in maintaining his/her client base. Whether a physician enters automation in the near future or several years down the road, it is important that he be able to turn to a reliable source to analyze the multitude of products on the market and develop a system that will not only meet his data needs, but will have the capabilities to communicate with his fellow colleagues and the medical data base libraries of the future. When discussing computers and their uses, it is important to look to the future and how it will affect a physician's job performance and future goals.

This growing interest by physicians in computerization and its affordability has interested many vendors. Physicians, now more than ever, are besieged with offers from computer companies to buy their particular product; however, they have minimal insight into the physician's basic needs. The physician, unless through personal interest, has limited knowledge of automation and the selection of hardware and software, nor does he have the time to evaluate and analyze his computer needs due to his practice of medicine. His staff has minimal expertise in this area, also, and significant problems could develop from this inexperience.

With these concerns and interests noted, staff began a detailed research project a year and a half ago to analyze the physician market and services that could be provided by the KMA or through a subsidiary of KMA's holding company. The research is a voluminous document which detailed the steps and actions that the Association could take in forming a computer services company. This proposal was presented at the April 1983 Board Meeting, at which time the Board requested a market survey and the creation of an ad hoc committee to review staff's recommendations and collect additional information on this proposed endeavor.

The detailed report maintained on file at KMA Headquarters is available to any interested member, but briefly it suggests offering the following services:

1. Consulting. Consulting services would be provided to assist physicians in the evaluation and determination of the appropriate system configuration to meet their needs. This service would offer a range of services from limited advice and evaluation or full involvement and on-site review. At a later date, should the computer services company offer its own product line, then the consulting service may have to be discontinued or changed to reflect that the company is providing an analysis based only on the equipment and products that it offers.
2. Education/Training. The primary purpose of this company would be to educate the KMA Membership and then, when offering a product line, offer detailed ongoing operator instruction on all programs and equipment maintained by the company.
3. Product Line. The company, with its collective purchasing power from the estimated 80% of the physician population that would possibly be interested in purchasing equipment, provides an ideal base for the purchase of equipment at discounted prices and reduced costs on software. The company would possibly support only one vendor, which would probably be one of the top four companies in the world. It is anticipated that cost savings to a KMA member from this endeavor alone would be substantial.
4. Support. Both hardware (equipment) and software (programs) support will be provided to all customers of the company. This would include equipment maintenance, program maintenance, and the upkeep and future expansion of the physicians' systems.
5. Long Range Goals. The company would gear its services to reflect the changing environment of the computer era and would include the options necessary to handle communications with other systems and the access of the future clinical data bases. The company would be in a unique position to coordinate the network facilities for the state and the creation of intrastate networks and clinic data bases, while coordinating the access with national libraries and data bases.

The services listed are but a general idea of the scope and nature of a computer services company. When reviewing this project, the Ad Hoc Committee, which consisted of both users and nonusers of computer systems, determined that the project would be phased in over a year's period with consulting and basic training being offered first to physicians. After becoming operational, the new board of the computer services company would determine the company's future goals and services.

To reinforce the research already undertaken, a membership poll was taken to analyze the market and determine the member interest. More than 80% of those responding were in favor of a computer services company concept that would provide services similar to those previously listed in this report. Approximately 350 practices are interested in becoming potential customers of the company should it be formed. Staff estimates that fewer than 100 customers would make a productive and profitable company. As previously indicated, with 80% of existing physicians as potential customers, and an anticipated influx of over 2,000 doctors into the state by the end of this decade, the company would have an excellent market to draw from. The company's implementation would be slow and deliberate, initially requiring a minimum expenditure while continuing to test the market and beginning to provide services. The main selling point of this entire concept is that the services and products would be distributed by a company owned exclusively by physicians. These services would be initially geared toward the practicing physician and no other entities. Therefore, all technical, personnel, and support operations would be highly defined/medically oriented, thus offering an excellent quality of service. The number of physicians' systems that could be generated by this company would provide a market base that would have extensive clout in dealing with major computer vendors.

Finally, the integrity and quality of service, as has been reflected in past KMA projects, would be maintained. Although we realize that not every physician in KMA would be interested in computers, we feel that it is in the best interest of the Association to enter into this project. We are in the "Age of Information." To maintain the large data bases requires automation. The computer will soon become as important a tool to a physician's practice as a telephone, x-ray machine and stethoscope. Its prominence in day-to-day operations will become more evident in the future. The computer services company will not only provide these services, but will continue long-range planning to foresee the utilization of future applications and to seek to provide these services to the physician. This is the basis on which the company's commitment to serve the physicians of Kentucky is to be structured. Although other

companies may offer this service, only a physician owned and controlled operation would insure that this would happen.

Financing of startup costs would not utilize any funds from KMA dues but would be the responsibility of KMA Physician Services, Inc. (Holding Company). These costs would subsequently be returned to KMA Physician Services, Inc. by the computer services company from its operational profits.

The Board appreciates the fine work of this committee which was comprised of William E. Blackburn, Jr., M.D., R. Kendall Brown, M.D., Robert DeWeese, M.D., James D. Ford, M.D., Ronald D. Hall, M.D., Thomas R. Taylor, M.D., Charles H. Veurink, M.D. and Don E. Cloys, M.D., Chairman.

The Ad Hoc Committee on Computer Services made a number of recommendations which were adopted by the Board and appear below. The Board felt it was important to bring these recommendations to the attention of the House for concurrence.

Richard F. Hench, M.D. Chairman

RECOMMENDATIONS:

1. The establishment of a computer services company to become operational as soon as feasible.
2. Initial company services consist of consulting, practice management workshops on computer utilization, and management of KMIC/KMA computer system.
3. All subsequent company services be determined by the computer services company board after incorporation with advice and consent of KMA Physician Services, Inc. (Holding Company) Board of Directors.
4. The company be named Kentucky Medical Computer Operations, Inc. (KMCO) with a logo design to be selected by the new company board.
5. The company be structured as follows:
 - Corporate Headquarters - KMA Headquarters Office (if possible).
 - Corporate Board consisting of not less than six nor more than eight members, tenure of office to be three years with staggered terms to provide continuity,
 - Directors appointed or elected by major stockholder (KMA Physician Services).
 - Schedule regular annual Board meeting, special meetings of the Board as called by Chairman or two Directors,
 - Quorum to be simple majority,
 - Other corporate bylaw provisions as are standard for such an operation,
 - Officers: Chairman of the Board, President, Vice-Chairman, Secretary-Treasurer, (the President to be the Chief Executive Officer and ex-officio member of the Board).
6. Only KMA members would be eligible for discount services.

Recommendations, Reference Committee No. 1:

Reference Committee No. 1 reviewed the Report of the Chairman, Board of Trustees. The Chairman and the Board are to be commended for their time and efforts in conducting the business of the Association. After discussion of the establishment of a computer services company, Reference Committee No. 1 recommends adoption of the Report of the Chairman, Board of Trustees, including Recommendations one through six.

Report of the Secretary-Treasurer

It is my privilege to report to the Membership on the corporate status of the Association. Fiscal management of the corporation remains of the soundest nature, although operating capital is presently insufficient to meet needs.

Dues income has remained constant for an eight-year period, in spite of an inflation trend unparalleled in our country's history. If we consider a comparison of the cost of goods and services we experienced eight years ago, it is almost inconceivable that our professional association has continued to function at 1983 costs with 1975 income.

This operation has been possible because of revenue from relatively high dividend income of past years. As everyone knows, however, those high rates we enjoyed in the past no longer pertain, and income this year will be less than expenses. I urge your attention to and support of the proposed dues increase so that we can remain a viable and active organization that can fulfill the profession's needs.

Your attention is also solicited to the reports and resolutions contained in the packet which describe all the many things that have taken place on your behalf this year. From the corporate standpoint, please carefully consider the reports of the holding company and the credit union, as these organizations have helped stabilize some of the Association's financial commitments, as well as provide significant services to the

Membership. The auditor's report has also been made available, and your comments or questions on it are welcome.

It is worth noting and remembering that the purpose of the Association is to promote the art and science of medicine. The complexity of modern society requires an equally complex approach to continue to fulfill the Association's needs, as well as serve the Membership and our patients. It is a pleasure to report that your Officers and Board of Trustees have skillfully managed the corporate affairs of the Association to meet those needs.

I sincerely appreciate the privilege of serving you and thank you for your confidence.

S. Randolph Scheen, M.D., Secretary-Treasurer

Recommendations, Reference Committee No. 1:

Reference Committee No. 1 reviewed the Report of the Secretary-Treasurer. Doctor Scheen is to be thanked for his continuing efforts and success in keeping the dues level stable for eight years instead of the five years which were projected. The Committee recommends this report be filed.

Report of the Executive Vice President

In today's world few things are simple, and the medical profession is often forced to deal with more than its share of complexities and outside intrusions. As such forces are spawned, the profession's organizations must adapt and anticipate to properly fulfill the needs of their individual members and the profession generally. This is the top priority of KMA.

Membership

KMA membership is at a new high. KMA's regular active members total 3,332 and overall membership is 3,965. We strive to fully understand and respond to attitudes and desires of the membership. Leadership and staff have an ongoing challenge to communicate fully with the membership on a myriad of issues, many of which are controversial. Such communication efforts need the assistance of the Delegates and committee members at the local level. Nothing replaces a one-on-one conversation between peers.

The increased benefits and services provided by the Association are helping demonstrate the value of membership and should strengthen this bond in the future.

Financial

For the past two or three years, my report has indicated the possibility that a dues increase would soon be necessary. We've been able to stretch a five-year dues plan into an eight-year one despite the highest inflation since World War II, but we've gone about as far as we can. This year our budget is in the red by a substantial amount, and the need to take steps to modify the dues structure is upon us.

Our reserve fund needs to be maintained at a level sufficient to protect our annual budgets and to ensure implementation of our programs should adverse swings in the economy take place. The integrity of this reserve is also essential to the continuity of any dues plan, for such a reserve generates capital that would otherwise have to be raised through substantial dues increases. Investment rates today are lower and will remain lower prohibiting the reserve fund from producing as well for us as it has in the past.

The $75 proposed dues increase should assure KMA of remaining on a sound financial basis.

Increased Activities

Annually, the scope and number of services provided by the Association and its related organizations increase rather dramatically. Since the last Annual Meeting, the KMA Physicians Services, Inc. (a holding company) has become operational. The KMA Insurance Agency has become a subsidiary of the holding company, and proposed to the House of Delegates this year is the formation of a computer company which would also be the holding company's subsidiary. These types of activities, conducted by individuals outside the KMA staff, are designed to bring many new benefits to Association members while not requiring the expenditure of dues dollars.

In addition, we received a charter last March for the KMA Physicians Financial Services, a Federal Credit Union. This new approach to bringing very special financial benefits and services to the membership is receiving national attention. These new organizations supplement the ever-increasing role of the Association in a positive way and are brought about in response to desires expressed by our members.

The number of programs, seminars, and workshops KMA sponsors is on the increase, as is attendance. Hopefully more members will become involved in the activities and programs of the Association, thereby realizing greater value from their membership. KMA is

at work continuously to act and react on matters affecting all aspects of the medical profession.

Headquarters Building

The 10,000 square foot addition to the Headquarters Building was completed on July 1 and has helped alleviate the extremely crowded conditions that previously existed. Staff's ability to perform its work has been greatly enhanced with the building addition which was totally financed by the KMA Insurance Agency. We hope the members take pride in their new Headquarters Building. We feel it demonstrates KMA's continuing commitment to serving the physician, the profession, and the public.

Governmental and Legislative Affairs

During the past year we have seen an unprecedented amount of activity at both the State and National levels regarding matters which affect the medical profession. Many of these proposals came without input from medicine, and I am sure we share similar frustrations in attempting to counteract efforts intended to alter established patterns of medical care delivery, financing, reimbursement and physician/patient relations.

The desire to cut the cost of medical care has prompted nearly all these Federal and State legislative and administrative actions. A similar desire has caused business and industry to increase their awareness of activities in the health care field, and new alliances are being formed, geared toward the end that fewer dollars will be spent on health care benefits. The use of block grants and the across-the-board cutback in Federal funding have brought about State action to change delivery mechanisms, the formation of Citicare, the promotion of Health Maintenance Organizations, Individual Practice Associations and Preferred Provider Organizations, as well as the utilization of allied health personnel in independent roles. We've also seen a reduction in Medicaid reimbursement, the initiation of DRG payments, so-called competition health insurance bills, mandatory out-patient surgery, inpatient preauthorization, and other infringements on the physician's decision-making process.

Some of these proposals emanated from the final report of the Kentucky Health Costs Coalition. Others were incorporated into the State Health Plan which was signed by the Governor in August. These "new ideas" which came from the State originated in either the Executive Branch or the Health Planning Division of CHR. In response, KMA voiced its concern through testimony at public hearings, in meetings with governmental officials, and in official correspondence addressing the State's proposals. The potential for lowering the quality of medical care and possibly increasing rather than decreasing costs, as well as the loss of freedom of choice, were among the many factors repeatedly emphasized. Even though it was estimated that more than 90% of all public testimony at statewide hearings on the State Health Plan was in opposition, the State Health Planning Council outvoted its most knowledgeable members from the health care field and approved the Plan practically in toto.

Unfortunately, during this past year similar experiences could be reported on almost a weekly basis. Frustrating indeed! Yet the Association leadership has continued to seek avenues to better serve the needs of our members and their patients. As staff, we recognize and appreciate the untiring efforts of your Officers and Board members, some of whom we are with on almost a daily basis as they represent the Association.

Physicians and their organizations across this Country are going through similarly frustrating experiences. While we continue to fight relentlessly to preserve the best medical care in the world, we see no lessening of the energies spent by government and others in addressing matters related solely to costs. At the same time, we must anticipate, develop counter proposals, act, react and participate vigorously in the legislative process. Many of the proposals contained in the State Health Plan must go before the Kentucky General Assembly before they can be implemented in our State. Medicine will have much work to do in the Kentucky Legislature in 1984, as well as with our Congressional Delegation in Washington. The governmental and legislative arena will be demanding increased time and efforts on behalf of all of us.

Summary

Future planning on both an immediate and long-range basis is an active ingredient of KMA. Representing the profession with government, allied groups, industry, labor, the public, third-party carriers, and the media is a part of every day's activities. We are eager to receive ideas and recommendations from the membership. Every letter and every telephone call is considered as we work with the Officers and Board of Trustees in proposing plans and programs for the future.

It is a personal privilege to work each day with the dedicated and outstanding staff at KMA, and it is an honor to work for and serve the physicians of this State.

Robert G. Cox, Executive Vice President

Recommendations, Reference Committee No. 1:

Reference Committee No. 1 reviewed the Report of the Executive Vice President. The Committee wishes to express appreciation to Mr. Cox and commends him on the manner in which he has guided our Association during his tenure in his position. The Committee recommends this report be filed.

Report of the Kentucky Medical Insurance Company

The fourth full year of operation of the Kentucky Medical Insurance Company has seen it "grow into maturity" in the professional liability insurance field. When the company opened its doors for business in June 1979, it was advised that it could be considered an established insurance company when it had reached the plateau of 1,700 or more insureds, and this goal will be reached in 1983. Another milestone in the development of our company will be reached and surpassed this year, as total assets will well exceed the $10 million mark by the end of 1983.

KMIC now insures approximately 40% of the total physician professional liability market in Kentucky. As work to increase business on a steady and sound basis continues, competitors are proceeding in markedly different directions. Some have suddenly, with little warning, withdrawn entirely from the Kentucky market. KMIC has undertaken to fill this void for individuals who meet the company's underwriting requirements. Other companies come into Kentucky offering reduced premiums or "special rates" in order to get their foot in the door, but they don't seem to make a whole lot of headway. Kentucky doctors know KMIC will be here when it is needed, but never know when other companies may pull out.

KMIC is committed to serving Kentucky physicians by charging reasonable and adequate rates and maintaining adequate reserves as recommended by the company's professional actuaries. KMIC is further committed to providing quality to Kentucky physicians—quality in coverage, quality in service and quality in defense. Some of the new quality services that have been put into effect this year are: a convenient premium payment plan, a special claims-made policy, and specially developed claims prevention seminars.

As services have increased, KMIC has grown in personnel, and has expanded office space with a 5,000 square foot addition to the current office area. The final touches on the building will be completed during August 1983. The new addition will also house staff from the KMA Insurance Agency, which continues to work hand-in-hand with KMIC in offering Kentucky physicians insurance programs tailored specifically for their needs. A portion of the building addition will be leased to KMA Physicians Financial Services, the newly formed federal credit union which will serve physicians, their families, and their employees.

KMIC, in looking into its future, is anticipating continued growth in the number of its medical professional liability policyholders, and is studying areas of expansion, such as liability insurance for other allied professions. The basis for growth has been on sound, conservative business and money management principles, and it will continue to be so. As KMIC grows, it will expand services and products and build on the solid foundation that it now has.

We pledge to you a company based on quality in all areas of professional liability insurance, as we continue to strive to merit your confidence now and in the future. Our thanks to those physicians throughout Kentucky who have shown their interest in and support of KMIC, which is here to serve you.

Ballard W. Cassady, M.D. Chairman, Board of Directors

Recommendations, Reference Committee No. 1:

Reference Committee No. 1 reviewed the Report of the Kentucky Medical Insurance Company Board of Directors and commends this Board for achieving the rapid growth of the Company to the number one sales position in liability insurance in the State. The Committee recommends that this report be filed.

Report of the Committee on Constitution and Bylaws
Recommendation only

RECOMMENDATION:

(NOTE: This recommendation is set forth in legislative amendment format with the new proposal being underscored and the language to be deleted set off

by brackets and accented by lines through the wording.)

1. CHAPTER IX. ASSESSMENTS AND EXPENDITURES

Section 1. The annual dues for membership in this Association shall be as follows: (1) Active Members, ~~[$225]~~ $300; (except those physicians elected to KMA membership within six months of the completion of their residency, fellowship or fulfillment of government-obligated service shall pay ~~[$142.50]~~ service shall pay $150 their first full year of membership); (2) Life Members, no dues; (3) Associate Members, $25; (4) In-Training Members, $20; (5) Inactive Members, $25; (6) Student Members, no dues; (7) Service Members, no dues; (8) Special Members, no dues. The dues during the first year for any active member shall be pro-rated on the basis of the date of his application. Dues fixed by these Bylaws shall constitute assessments against the component societies. Unless otherwise instructed by the Board of Trustees (which may institute centralized billing), the Secretary of each component society shall forward its assessments, together with its properly classified roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county, to the Secretary-Treasurer of this Association as of the first day of January each year.

Recommendations, Reference Committee No. 1:

Reference Committee No. 1 reviewed the Report of the Committee on Constitution and Bylaws - Recommendations #1, **only**. There was positive discussion regarding the dues increase from the members present in the Committee meeting, and the Committee recommends the Report of the Committee on Constitution and Bylaws - Recommendation #1, **only**, be adopted as presented.

Report of KMA Physicians Financial Services, A Federal Credit Union

Just a short year ago, the idea of KMA physicians having their own financial institution had just begun to germinate. You may recall that the Board of Trustees approved a study to determine the feasibility of establishing a financial institution which would be available only to KMA members, their families and employees, along with other associated entities.

The KMA Physicians Financial Services, a Federal Credit Union (F.C.U.), was chartered on January 28, 1983, and opened its books for business on March 28, 1983. The Credit Union "start up" has exceeded every expectation. After only three months of operation, the Credit Union had exceeded the one and a quarter million dollar mark in deposits, and over three hundred thousand dollars in loans.

On August 1, the Credit Union moved into its new quarters on the second floor of the new addition to the KMA building. This permits the Credit Union to perform all of the customary banking and financial services, including checking, insured money market accounts, Visa and MasterCard credit cards, as well as a wide variety of consumer type loans.

The KMA Physicians Financial Services (KMA-PFS) Credit Union is managed by Mr. Charles D. Crabtree, who came to us after some 17 years as Manager of Kentucky Telco, Federal Credit Union, one of the largest federal credit unions in Kentucky. Mr. Crabtree is in the process of developing a fine professional staff, and is completing plans to permit our Credit Union members to access their Credit Union accounts through a statewide network of Automated Teller Machines (ATM). This network has ATM locations throughout all of Kentucky, consisting of some 190 locations. This permits members to access their share draft (checking) accounts 24 hours a day, 365 days a year, from any designated ATM in the state, and is just one of the progressive financial services available and being made available to members of our Association.

The Credit Union credit cards, Visa and MasterCard, have worldwide acceptance, and may be issued with substantial credit limits to qualified members. The APR (annual percentage rate) is 15%, with no other service charge or fees. A 25 day grace period is included.

To join the new KMA-PFS, F.C.U., a membership enrollment card must be completed and a minimum deposit of $10.00 is required. This joining of the Credit Union permits you to access all of its financial services.

The KMA-PFS, F.C.U., is fast becoming a dynamic, viable part of your Association, and we invite your interest and participation.

Dwight L. Blackburn, M.D. President

Recommendations, Reference Committee No. 1:

Reference Committee No. 1 reviewed the Report of the KMA Physicians Financial Services, A Federal Credit Union, and wishes to congratulate the KMA Physicians Financial Services on its establishment and rapid growth. The Committee recommends that this report be filed.

Report of the Chairman of the Governing Council
Medical Student Section

The KMA Medical Student Section (KMA-MSS) has officially been recognized as part of the KMA since September 1982. The past year has been filled with many organizational activities, meetings, and conventions.

Last winter, the KMA-MSS sent five representatives to the AMA-MSS Interim Convention in Miami Beach, with one of our members serving on a reference committee dealing with future AMA-MSS health policies. Later, a pair of lectures on medical student health was sponsored in conjunction with the faculties at both the University of Louisville and the University of Kentucky Medical Schools. Hopefully, this lecture series can be expanded in the upcoming year to include more speakers and topics of interest to medical students.

The KMA-MSS met four times for business and organizational activities, splitting meetings equally between both schools. These meetings included budgetary discussions and decisions, plus debate on policies as proposed by the AMA-MSS and other members of the KMA-MSS. We decided upon these proposals, and sent delegates and alternates to the AMA-MSS Annual Convention in Chicago in June. At this convention the KMA-MSS helped lobby for student representation on the AMA Board of Trustees.

The first KMA-MSS Annual Convention was held in Louisville on August 20, 1983. Future KMA-MSS policy and resolutions to be submitted to the KMA House of Delegates were discussed and adopted. Issues of interest to Kentucky medical students and medical education were raised, and progress on these issues will be a major goal of the KMA-MSS in the next year. The KMA-MSS will also be concerned with continuing the present level of membership, which includes nearly 75% of the medical students in the state.

The KMA-MSS has slowly begun to make progress in its first year of existence. We look forward to future growth, and to a continuing good relationship with the KMA, for together, we can and will improve the quality of medical care in our state.

W. Steven Wilson Chairman

Recommendations, Reference Committee No.1:

Reference Committee No. 1 reviewed the Report of the KMA Medical Student Section Governing Council. The Committee would like to congratulate the KMA Medical Student Section Governing Council, on its progress during its first year of existence and commends the Council regarding the participation of 75% of the student members. The Committee recommends that this report be filed.

Resolution K
Board of Trustees
KMA Physicians Financial Services, A Federal Credit Union

WHEREAS, the 1982 House of Delegates authorized the Board to study the feasibility of establishing a financial institution for members of KMA, their families, employees and other associated entities, and

WHEREAS, after careful and considerable study of the benefits that would accrue to KMA members, the Board of Trustees authorized the development and implementation of the KMA Physicians Financial Services, Federal Credit Union, and

WHEREAS, since March 28, the KMA Physicians Financial Services has total deposits in excess of two and one-quarter million dollars and has over 300 members, now therefore be it

RESOLVED, that the 1983 House of Delegates enthusiastically confirm its support of the KMA Physicians Finanacial Services, Federal Credit Union, and urge all KMA members to participate in this significant breakthrough in membership benefits.

Recommendations, Reference Committee No. 1:

Reference Committee No. 1 reviewed Resolution K – KMA Physicians Financial Services, a Federal Credit Union, introduced by the Board of Trustees, and recommends adoption of this Resolution.

Mr. Speaker, I recommend that the Report of Reference Committee No. 1 be adopted as a whole.

The Committee would like to express its apreciation to Joan Jecker for her secretarial assistance to the Committee. Additionally, I would like to express my sincere thanks to the members of this Committee, David H. Bizot, M.D., Louisville; Larry C. Franks, M.D., Paducah; Howard B. McWhorter, M.D., Ashland; and Don R. Stephens, M.D., Cynthiana, for their efforts in the development of this Report.

Reference Committee No. 1:
Earl P. Oliver, M.D., Scottsville, Chairman
David H. Bizot, M.D., Louisville
Larry C. Franks, M.D., Paducah
Howard B. McWhorter, M.D., Ashland
Don R. Stephens, M.D., Cynthiana

• Editorial Note: Unless otherwise indicated, the Reference Committee action on each report and Resolution was accepted as printed here. Any opposing action taken is stated in discussion following the item.

REPORT ON REFERENCE COMMITTEE NO. 2

Sally S. Mattingly, M.D., Lexington
Chairman

Reference Committee No. 2 considered the following Reports and Resolutions:

13. Report of the Scientific Program Committee
14. Report of the Scientific Exhibits Committee
15. Report of the Continuing Medical Education Committee
16. Report of the Cancer Committee
17. Report of the Hospital Committee
18. Report of the Emergency Medical Care Committee
19. Report of the Interspecialty Council

Resolution A — Section on Hospital Medical Staffs (Harold L. Bushey, M.D.)
Resolution C — Medical Consequences of Nuclear War (Barry Wainscott, M.D.)
Resolution F — Section on Hospital Medical Staffs (Campbell-Kenton County Medical Society)
Resolution T — Honoraria for Speakers (Fayette County Medical Society)
Resolution X — Medical Staff Representation on the Hospital Governing Body (McCracken County Medical Society)
Resolution Y — Medical Staff Self-Government (McCracken County Medical Society)
Resolution Z — Legal Representation for Medical Staffs (McCracken County Medical Society)

ITEMS FOR CONSENT

Reference Committee No. 2 reviewed the following items and recommends they be filed as indicated, by the consent of the House, without discussion:

13. Report of the Scientific Program Committee – filed
14. Report of the Scientific Exhibits Committee – filed
15. Report of the Continuing Medical Education Committee – filed
16. Report of the Cancer Committee – filed

Report of the Scientific Program Committee

The 1983 KMA Annual Meeting features the overall theme of "Human Sexuality." The Committee members and specialty groups have gone to great lengths to bring in some of the country's most outstanding speakers, and we feel the topics that will be presented will be very timely and of interest to the general membership.

A highlight of this year's Meeting will be an afternoon devoted to the subject of stress, and we are pleased to have Doctor Robert Eliot from the University of Nebraska as our speaker. Doctor Eliot is a most entertaining, informative, and highly sought after speaker.

The Scientific Program Committee met by mail in early November to plan the program, and as I think you will agree, did an outstanding job. A second meeting was held in December with the Presidents of the 23 specialty groups participating in the Annual Session to discuss their parts in planning the Scientific Program. The various specialty group scientific programs, which are held in conjunction with our general session, have proven invaluable and we feel provide an excellent contribution to the continuing medical education of the membership. I am extremely grateful for the excellent cooperation in planning the overall meeting we have received from the specialty groups.

This year the program will again be held at the Ramada Inn/Bluegrass Convention Center which has been totally remodeled. Overall, the Ramada Inn/Bluegrass Convention Center is an excellent convention facility allowing us to hold the entire meeting at a single location and is large enough to provide housing for the majority of attendees.

The Committee is proud of the fact that KMA's Annual Scientific Program continues to be one of the best attended state meetings in the country. It has received accreditation for continuing medical education by the American Medical Association as well as several specialty societies. The Committee feels that the technical exhibit area is a worthwhile and meaningful adjunct to the formal scientific program, and the exhibits offer

members the opportunity to discuss new products with the various manufacturers free from the interruptions and distractions of the office or hospital. The Technical Exhibit Hall has been redesigned this year and the number of exhibits increased.

As Chairman of the Scientific Program Committee, I am most grateful for the efforts of those who have assisted in the formation of this program, particularly the Program Committee, specialty group presidents and program chairmen. I am also extremely thankful for the excellent staff who continually provided all of the work to make these programs the outstanding successes they have been through the years. In particular, I would like to extend my sincere appreciation to Mr. Bill Applegate and Mrs. Ann Powell for their tremendous help in achieving these goals.

Suggestions for future programs are always welcome by the Scientific Program Committee.

James A. Baumgarten, M.D., Chairman

Report of the Scientific Exhibits Committee

The Scientific Exhibits Committee appreciates the opportunity of summarizing its activities to the House of Delegates. We are extremely proud of the professional nature of the exhibits at our Annual Meeting which appropriately focuses attention upon the purpose of the meeting. Individual physicians and groups of physicians spend many hours in developing their material and exhibits so that others may share in the various techniques and newly developed information.

The members of the Committee very diligently review the various applications in accordance with continuing medical education needs and the statement of policy as originally drafted. It is only rarely that the Committee rejects applications, and they usually center around "commercial enterprise" which properly belongs in the Technical Exhibit area.

During the 1982 meeting, 10 scientific exhibitors participated, and we fully expect that many during the 1983 meeting. Several problems which occurred during the 1982 meeting have been reviewed and changes made to reduce loss of materials and damages to exhibits.

On behalf of the Committee members, we appreciate the opportunity to serve our fellow physicians. We urge all members to attend the Annual Meeting and to observe firsthand the outstanding contributions of their peers.

Richard A. Kielar, M.D., Chairman

Report of the Committee on Continuing Medical Education

The CME Committee has served two purposes over the past five years: as a provider of CME and as an accreditor of CME sites. This dual responsibility has been both confusing and complicated for the Committee to continue to maintain. The Committee felt that these two responsibilities should be divided into two separate entities. The CME Committee, by virtue of the responsibilities bestowed upon it by the Board, is recognized as the intrastate accrediting authority for Kentucky. This authority allows the Committee to accredit sites across the state. We annually review approximately five facilities for accreditation. This is a long and involved process that requires numerous days of activity in working with the site to help them become organized and to create a program that meets the "Essentials for Accreditation." The Committee felt that to continue to also act as the Association's CME provider would continue to provide confusion, problems in keeping the two jobs separate, and would not provide adequate time for both the accrediting process and the provider segment. Therefore, the CME Committee asked the Board of Trustees to divide the Committee into two entities: the CME Committee, which would retain all responsibility for intrastate accrediting activities while continuing to monitor the national CME efforts, and the Council on CME which would act as the Association's CME provider by sponsoring all Association activities including the Annual Meeting, the Emergency Medical Care Seminar and other scientific programs. The CME Committee would accredit the Council on CME as an accredited provider, which is possible because of its recognition at the national level as the intrastate accrediting authority. This in-state accreditation is necessary since the Committee recommended to the Board, which was subsequently approved, that it should not renew its national accreditation with the Accrediting Council on Continuing Medical Education (ACCME). National accreditation was expensive to maintain, and since the Association only sponsors an average of three programs per year, and since the CME Committee can bestow the same privileges on the Council on CME, it was felt that the direct national recognition of Association programs was not necessary.

On the national level, ACCME is proceeding in revising the "Essentials for Accreditation" and the "Guidelines for Accreditation." The Committee usually adopts these guidelines as their own, and as soon as

all national sponsoring organizations approve these documents the Committee will incorporate them within its own structure. ACCME has set up a new approach to guarantee the quality of states acting as intrastate accrediting authorities. Sometime in the next three to four years ACCME will conduct a site survey of the CME Committee to determine whether it meets the criteria for being a nationally recognized accreditor. The AMA already recognizes KMA as the intrastate accrediting authority, and only if we want to be recognized by all organizations as the accrediting source would we have to seek this recognition. The Committee will continue to monitor this proposal which will be discussed at a meeting in Chicago in late September and early October, 1983. The Committee will be represented at these discussions and report back to the membership as things progress further.

As Chairman of the CME Committee, I have appreciated the opportunity of serving the Association and have been privy to many changes in the educational field. The entire process is involved and complicated and requires an extensive amount of the Committee's and staff's time in analyzing and determining how the numerous changes will affect the Association. The Committee feels that a strong educational program is imperative to a physician's continuing education; however, at the same time, it should be structured loosely to stimulate a learning process. The mandatory requirements of relicensure and membership have proven ineffective in stimulating physicians to continue their education. A new style of self-training is quickly becoming popular and the Committee will be observing this idea further in the future. I appreciate the efforts of the Committee in conducting the site reviews and requests for cosponsorship. In 1984 the House will receive separate reports from the Council on CME and the CME Committee. I appreciate having had the opportunity of serving as Chairman for the past four years.

Stuart Graves, Jr., M.D., Chairman

Report of the Cancer Committee

The KMA Cancer Committee has held two meetings during the Association year reviewing the various activities of cancer research and treatment centers throughout Kentucky. The Committee has been deeply involved in seeking parameters which individuals or groups might consider when establishing a cancer center. While the Committee devotes a great deal of time to the larger cancer centers, it is important to note that the vast percentage of cancer treatment takes place in private physicians' offices.

Annual reports are available from each of the large cancer centers and may be secured upon request.

The Committee has seriously studied the feasibility of providing additional information which may be helpful to Kentucky physicians in communicating the various activities underway by the various centers and groups located both in Kentucky and outside state boundaries. We have an excellent relationship with the Executive Director of the Kentucky Chapter of the American Cancer Society, and we receive a report from that organization at every meeting. Additionally, the Nurse Oncology Society also reports regularly, and a member of that society sits as an ad-hoc member on the Committee.

Currently building construction, various treatment methods, research and educational programs are beginning to generate the need for tremendous amounts of health dollars. The Committee believes that prior to the development of new cancer centers, patient population studies and the particular needs of an area or region should be considered. The Committee supports the development of parameters which may be utilized in establishing new cancer centers for improving the quality of cancer care in Kentucky. However, it strongly opposes the establishment of rigid, strict formulas for health planning purposes.

On behalf of the KMA Cancer Committee, I wish to thank members of the Association for the opportunity to serve. If the Committee can assist in any way to provide information or to review items of concern, we would be pleased to receive your input. Members of the Committee are dedicated to providing service and are to be congratulated for their concern and willingness to serve.

P. Raphael Caffrey, M.D., Chairman

End of Consent Calendar Items
Report of the Hospital Committee

The Hospital Committee met on two occasions to consider items referred to it by the Executive Committee.

The matter of innoculating hospital employees against hepatitis-B was one of the subjects of concern. The Committee reviewed information on the vaccine itself, how it reacts with the virus, how it is produced and

administered and the costs involved. Positions of AMA and the American Hospital Association were also reviewed.

The Committee members felt that as the vaccine becomes more widely available and people become more aware of the disease and the risks involved, hospitals will have to take a serious look at this issue. In anticipation of that, the Committee recommended to the Board of Trustees that KMA suggest high risk health care personnel to be vaccinated against hepatitis-B; that the issue of informed consent for such vaccination be dealt with by the respective hospitals involved; and that the question of who pays the cost of the vaccination be resolved at a local level. The Board accepted this recommendation.

The Hospital Committee also considered the proposals of the Joint Commission for the Accreditation of Hospitals for modifying its current *Accreditation Manual for Hospitals*. The Committee recommended, and the Board of Trustees approved, that KMA oppose that portion of the revision which would change the name "medical staff" to "organized staff." The AMA House of Delegates essentially agreed with the Committee's position, for at its June meeting, the House voted to continue the use of the term "medical staff" in the title and text of the chapter that describes the qualifications for membership, method of selection, privilege delineation, and other standards a hospital medical staff should maintain.

The Committee further considered a situation at the Highlands Regional Medical Center in Prestonsburg where the hospital had executed an exclusive contract with a group of CRNAs for the delivery of all anesthesia services within the hospital. Several members of the Committee visited the Highlands Regional Medical Center and met with representatives of the Board of Trustees of the Center to discuss this situation. The Committee members then submitted the following recommendations to the KMA Board, which were approved:

1. Medical staff constitution and bylaws should be drawn with sufficient specificity that the duties, responsibilities and obligations of those individuals granted privileges are straightforwardly and clearly defined.
2. KMA reaffirm its policy relating to the necessity of adhering to procedural and substantive due process requirements stated in hospital constitutions and bylaws.

The Committee submitted, and the Board accepted, the following statement **for information only**:

Whereas, the U.S. Court of Appeals for the Fifth Circuit has handed down an opinion in the case of *Hyde v. Jefferson Parish Hospital District, et al*, which indicates that an exclusive contract for the delivery of anesthesia services amounts to a "tying arrangement" violative of Section 1 of the Sherman Act, which is therefore "per se" illegal, and

Whereas, the process of initiating an appeal of that decision to the United States Supreme Court has been commenced through the filing of a petition for a Writ of Certiorari, and

Whereas, the state of the law dealing with the propriety of exclusive contractual arrangements is therefore less than clear,

Now, therefore, the Hospital Committee of the KMA recommends that no policy statement be made regarding exclusive contractual arrangements between hospitals and physicians or other individuals until the appellate proceedings regarding the case of *Hyde v. Jefferson Parish Hospital District, et al*, have been concluded.

As Chairman, I would like to thank the members of the Hospital Committee for their interest and participation in the activities of the Committee this year.

Royce E. Dawson, M.D., Chairman

Recommendations, Reference Committee No. 2:

The Committee reviewed the Report of the Hospital Committee and would like to draw attention to and endorse the KMA Board of Trustees decision and the AMA House of Delegates decision to maintain the use of the term "medical staff."

The Committee recommends this report to be filed.

Report of the Emergency Medical Care Committee

The Emergency Medical Care Committee met on November 3, 1982, to plan the 13th Annual Emergency Medical Care Seminar, which was presented June 14-16, 1983, and to discuss the status of emergency medical services in Kentucky.

The Committee discussed a report on Kentucky's hospital emergency rooms which was done by the Emergency Department of the University of Louisville School of Medicine. The report noted that some patients arrived at University Hospital without being properly stabilized, even though they had been seen by a physician in another hospital. The media obtained the report, and unfortunately, emphasized its more negative aspects,

particularly those which were interpreted as indicating that emergency services provided in nonmetropolitan areas were less than optimal.

Two authors of the report, who are also members of our Committee, were in attendance at our meeting to discuss the report. They indicated that the purpose of the report was to encourage emergency physicians to evaluate the level of care rendered to their hospitals and take appropriate action to improve patient care. The report was not intended to get the media attention it received. It was automatically made available to the local news media because it was a U of L faculty report.

Because the Committee felt the information contained in the U of L report was important, it was sent to each hospital in Kentucky along with a copy of the critical care standards developed by the Trauma Committee of the American College of Surgeons. In addition, the adminstrators, medical staffs, and emergency departments were advised of the American College of Surgeons consultative services. The American College of Surgeons will, upon invitation, visit those responsible for the operation of a hospital emergency room and objectively discuss the department's strengths and weaknesses on a confidential basis.

During our discussion, it became apparent that there was a lack of information available in Kentucky with regard to emergency medical services in general. The Committee was unaware of any current data available that indicated the number of Kentucky hospitals with emergency departments, their JCAH categorization, their staffing, and the degree of training of the physicians staffing those departments. As a result, the Committee agreed to survey Kentucky hospitals to determine: the number of hospital emergency rooms in Kentucky; the nature of emergency room coverage, *e.g.*, full-time emergency physicians; residents working part time or medical staff on call; the specialties represented in emergency room coverage, and the specialty boards certifying them.

A list of licensed hospitals was obtained from the Kentucky Hospital Association. 124 hospitals were contacted, and 69% (86 hospitals) responded. Of these, 91.8% (79) indicated that they had emergency departments.

Eight Kentucky hospitals reported designation as Category I Trauma Centers by the JCAH. 26 reported Category II, 18 Category III; and 27 did not respond to this question.

Emergency department visits per year ranged from 1,000 to 50,000. 881,178 total visits per year were reported with eight hospitals not responding.

To determine physician coverage of the emergency department, we asked respondents to indicate which description best applied to their individual hospital. 30 reported full-time emergency physicians on contract with the hospital. Six reported full-time emergency physicians employed by the hospital. Thus, 45% of the hospitals responding indicated arrangements for full-time emergency department coverage.

Forty-three hospitals reported the emergency room was covered by active medical staff on call, or 55% of the hospitals responding. Of those with medical staff on call, 28 hospitals reported special arrangements with part-time emergency physician coverage on evenings and weekends. Specialties most frequently reported as having emergency room coverage responsibility were family practice, internal medicine, emergency medicine, general surgery, and pediatrics.

Sixty hospitals reported at least one physician certified in advanced cardiac life support; 36 reported certification of at least one physician in advanced trauma life support; 21 hospitals have at least one emergency medicine residency trained physician; while 16 reported other certifying boards of their emergency physicians.

The Committee is hopeful that this survey will serve as a baseline for future studies that might examine the status of emergency department availability and coverage in Kentucky.

The balance of the Committee's activities revolved around the planning and implementation of the 13th Annual KMA Emergency Medical Care Seminar which was held in June. The program was accredited for continuing education by the American College of Emergency Physicians; the National Registry of EMT's; the American Medical Association; the Kentucky Academy of Family Physicians; and the Emergency Department Nurses Association. The meeting was 2 1/2 days long, and 414 people registered for the program. We again made an afternoon at Churchill Downs available to the participants, and 180 people attended the "Day at the Races" on Thursday afternoon.

The meeting was a combination of individual lectures and several simultaneous workshops. A highlight of the program was an extrication techniques demonstration by the Louisville Fire Department and the exhibition of air ambulances from Jewish Hospital and Humana Hospital University.

The Committee appreciates the amount of time that is so freely given by those physicians, nurses, and paramedics who come and serve as faculty for the program. Those individuals who lecture and preside over the meeting receive no reimbursement for their participation or for their expenses in traveling to and from the meeting. Were it not for the generosity of these individuals, it would not be possible to present a program of this calibre for such a low registration fee. The small fee charged covers the cost of meals and other incidental expenses.

The Committee recommends that the Seminar be held again next year with the Emergency Medical Care Committee as the coordinating agency. The members of the Committee have again contributed a considerable amount of time and expertise this year, for which I am most grateful

E. Truman Mays, M.D., Chairman

RECOMMENDATION:

1. The Emergency Medical Care Committee recommends that the Emergency Medical Care Seminar be held again next year with the Committee serving as its coordinating agency.

Recommendations, Reference Committee No. 2:

The Committee reviewed the Report of the Emergency Medical Care Committee and commends the Committee on its work, especially with regard to the collection of data on emergency rooms in Kentucky.

The Committee recommends this report be adopted.

Report of the Interspecialty Council

The Interspecialty Council convened on one occasion during the year to review several items of concern. The primary purpose of the meeting was to review and discuss the Blue Cross and Blue Shield respiratory therapy guidelines. The proposed guidelines were developed and endorsed by the American College of Pediatricians; American College of Physicians; American College of Surgeons; and the National Blue Cross and Blue Shield Association.

Presently, there are no parameters for the use of respiratory therapy. Blue Cross and Blue Shield representatives pointed out that the purpose of the guidelines was not to penalize or refuse payment but to make all parties involved more aware of the high utilization. After reviewing the proposed guidelines, the Council discussed in detail the various components of the proposal. Overall, Council members felt that utilization of respiratory therapy had changed in scope but had not necessarily been reduced. Several members pointed to the increased average age of hospitalized patients, in much more serious condition than in the past, who may need therapy immediately. Additionally, many elderly patients may not be definitively diagnosed for three or four days and the use of therapy may be indicated during these delays. The Council requested that Blue Cross and Blue Shield representatives research the addition of pulmonologists to many hospital staffs and their effect upon the utilization of various respiratory and inhalation therapies.

After considerable discussion, the Council elected **"not to endorse"** the guidelines and suggested that the term "guideline" may be inappropriate and misleading. However, the Council felt that the guidelines could be useful for educational purposes. One of the major reasons for concern of the term "guideline" was the implication that the criteria would have to be met and could possibly be interpreted in courts of law as rigid standards of medical care. A less threatening title might be more effective and prove to be more useful in the long run in accomplishing cost containment.

The KMA Department of Specialty Services reported that 14 specialty groups are now utilizing the available services. Several specialty groups use the services extensively in communicating with membership and performing administrative services. We urge those groups not presently participating in this program to seriously consider it.

In January 1984, the Kentucky General Assembly will convene. The Interspecialty Council urges all specialty groups to channel their programs and proposals through the KMA Committee on State Legislative Activities. A concerted and unified effort is critical to a successful legislative year and provides to Legislators a clear understanding of Medicine's position.

The Council appreciates the trust of the Association and thanks all members of the KMA for the opportunity to be of service. We look forward to continued participation in the serious discussion of issues of interest to the profession and to the public.

Paul J. Parks, M.D. Chairman

ADDENDUM

The KMA Board of Trustees assigned the task of reviewing the Blue Cross and Blue Shield Preadmission

Program to the Interspecialty Council. The Assurance Plus Program is operational at King's Daughters Memorial Hospital in Frankfort and covers State employees only. Plans presently call for the program to be expanded to 30 additional hospitals on October 1 and to the remainder by January 1, 1984, for all State and Board of Education employees. Each specialty Council representative reviewed admission and diagnostic criteria and made comments and suggestions to specific points in the admission criteria. These comments along with letters have been forwarded to Blue Cross and Blue Shield for their consideration. The Council neither endorsed nor recommended the Assurance Plus Program, but did discuss the Program in detail.

The Program requires that the physician obtain prior authorization from Blue Cross and Blue Shield before admitting a patient to the hospital for an elective procedure. Emergencies, psychiatric or maternity admissions are exceptions to the rule and do not require prior authorization. A toll-free line will be in operation between 8:00 a.m. and 5:30 p.m. E.S.T. with RN's asking predetermined questions related to the proposed admission. Should the patient be admitted after hours, the physician would call Blue Cross and Blue Shield the next morning, or in cases of weekend admissions, the physician would contact Blue Cross and Blue Shield on Monday morning. When a patient is denied preadmission certification, they are informed by a letter from Blue Cross with copies sent to the physician and hospital concerned. A broad educational effort is being undertaken to fully explain the program to Kentucky physicians.

While the Council did not adopt a position on the proposal, several facets of the proposal are somewhat different than other similar programs. Approval can be obtained for admission as far as 60 days in advance, which would be helpful in prearranging elective admissions. This particular contract is in force for 12 months, and the Interspecialty Council will periodically review its progress and report to the Board of Trustees. Several suggestions were made and others will follow that may be incorporated into the criteria. Although the Council was assigned the task of reviewing only the Assurance Plus Program, its main focus centered upon the entire preadmission concept.

The underlying basis of preadmission rests with rising health care costs. Rising health care costs are no longer the sole concern of government and bureaucrats. In fact, we are finding just as much concern in the Chamber of Commerce segment of our population who pay most of the costs. When you couple increased technology, the aging American, and total access to health care by all Americans, health costs have suddenly exceeded many of the other components of the Consumer Price Index. Thus, a tumultuous demand has been generated to reduce costs at all possible levels.

The basic question each physician in Kentucky must consider with any particular program is their long-term relationship with their patients. The physician/patient relationship should normally be bound by third party rules and regulations. Historically and philosophically, patient contracts with insurance companies have not necessarily entered into this relationship. However, with the advent of fully paid hospital benefits, the UCR Contracts, and Federal funding for the aged and indigent, economics have dictated that this does in fact become an integral and permanent part of most of our profession and practices.

From the Chairman's perspective, the situation we find ourselves in appears to be more a political than a legal problem. Quality and accessibility to medical care, the theme of the 1960's and 70's, has now been replaced by necessity and affordability. For 20 years, organized medicine warned the public and the payors of this eventuality only to have it fall upon deaf ears. It is conceivable that the health care budget crunch and the varying programs designed to alleviate this problem will return to America's aged and indigent to that era which preceded Medicaid and Medicare.

Quick fix, stopgap approaches which have been cumbersome, costly, and woefully inadequate are not the answer to the health cost dilemma. Only through long-term, serious studies by all parties involved, as proposed through the AMA and its Health Policy Agenda for the American People, can we seriously begin to reach a consensus.

Organized medicine should cautiously approach the concept of preadmission, weighing carefully our philosophical positions with the awesome reality of the cost dilemma. Rational and deliberate discussions which bring about positive alternatives and which allow medicine to participate in the decisions which affect our profession should be our goal. Perhaps in no other time in history have we faced such an attack upon our integrity and our professional competence. On the other hand, at no time in our history has the public and profession demanded that the course we set be the proper one.

Recommendations, Reference Committee No. 2:

The Committee reviewed the Report of the Interspecialty Council. The Assurance Plus Program was not considered specifically because this issue is being addressed in detail in material referred to Reference Committee No. 4.

The Committee recommends this report be filed.

Resolution C
Barry Wainscott, M.D.
Medical Consequences of Nuclear War

WHEREAS, the House of Delegates of the AMA has adopted a report recommending that the AMA "inform the President and Congress of the medical consequences of nuclear war, prepare informational materials to educate physicians and the public on the medical consequences of nuclear war," and cooperate with authorities "in dealing with matters having to do with health and medical care in the event of national emergencies," and

WHEREAS, the AMA report states: "Physicians, like citizens globally, abhor war. They are especially concerned about the medical consequences in the event of a thermonuclear war. Available data reveal that there is no adequate medical response to a nuclear holocaust. In targeted areas, millions would perish outright, including medical and health personnel. Additional millions would suffer severe injury, including massive burns, and exposure to toxic levels of radiation, without benefit of even minimal medical care;" now therefore be it

RESOLVED, that the Kentucky Medical Association recognizes the catastrophic danger to all life in the event of nuclear war and supports efforts for the prevention of such a nuclear holocaust by encouragement of global nuclear disarmament, and be it further

RESOLVED, that the Kentucky Medical Association recognizes that nuclear war represents one of the world's greatest health hazards and calls upon its members to inform themselves, their colleagues and the general public about the medical consequences of nuclear war.

Recommendations, Reference Committee No. 2:

The Committee considered Resolution C, Medical Consequences of Nuclear War, introduced by Barry Wainscott, M.D. While the medical consequences of nuclear war are of deep concern, the Committee was troubled about the potential political and social misuse of such a statement. Further, it was felt that there are other harmful conventional and biological agents in use that should demand equal attention.

The Committee recommends that Resolution C be rejected.

Resolution A
Harold L. Bushey, M.D.
Section on Hospital Medical Staffs

WHEREAS, the American Medical Association has developed a Section on Hospital Medical Staffs with one voting Delegate and Alternate, and

WHEREAS, many changing trends in medicine are occurring within or directly affect the hospital medical staff, and

WHEREAS, direct representation to the House of Delegates of the Kentucky Medical Association by this segment of the physician community would benefit both the organization and the profession through direct input on unique matters, now therefore be it

RESOLVED, that the Board of Trustees be directed to study the issue of hospital medical staff representation in the House of Delegates and report its findings and recommendations to this House for consideration at its 1984 meeting.

Resolution F
Campbell-Kenton County Medical Society
Section on Hospital Medical Staffs

WHEREAS, the AMA House of Delegates endorsed the formation of the Hospital Medical Staff Section of the American Medical Association at its 1982 Interim Meeting, and

WHEREAS, the First Annual Assembly Meeting of the AMA-Hospital Medical Staff Section commenced in Chicago on June 17-20, 1983, and

WHEREAS, the delegates to the HMSS adopted a resolution calling for the AMA to encourage all state medical societies to establish statewide Hospital Medical Staff Sections, and

WHEREAS, there are many issues in health care delivery that impact directly on physicians as part of the Medical Staff of a hospital, and

WHEREAS, Federal, State and local governments, third-party insurance carriers; and business and labor groups are becoming increasingly active in developing policies that directly affect hospital Medical Staffs, and

WHEREAS, each Medical Staff in the Commonwealth of Kentucky could benefit from sharing its ex-

periences with the other Medical Staffs of the State, and

WHEREAS, the KMA is the most representative organized medical society in the Commonwealth, now therefore be it

RESOLVED, that the Board of Trustees be requested to appoint a special ad hoc committee to investigate the concept and develop a possible plan to implement a Hospital Medical Staff Section of the Kentucky Medical Association, and be it further

RESOLVED, that this committee to study the formation of the Hospital Medical Staff Section shall report its findings and recommendations to the Delegates at least 60 days prior to the 1984 Annual KMA Meeting.

Recommendations, Reference Committee No. 2:

The Committee considered jointly Resolution A, Section on Hospital Medical Staffs, introduced by Harold L. Bushey, M.D., and Resolution F, Section on Hospital Medical Staffs, introduced by the Campbell-Kenton County Medical Society.

The Committee feels that Resolution F better addresses the issue and, therefore, recommends that Resolution F be adopted in lieu of Resolution A.

Resolution T
Fayette County Medical Society
Honoraria for Speakers

WHEREAS, the Kentucky Medical Association should provide appropriate honoraria for its Annual Meeting speakers, now therefore be it

RESOLVED, that the Board of Trustees of the Kentucky Medical Association reevaluate the stipend for guest speakers at the Annual Meeting of the Kentucky Medical Association.

Recommendations, Reference Committee No. 2:

The Committee considered Resolution T, Honoraria for Speakers, introduced by the Fayette County Medical Society. The Committee was advised that the Executive Committee of KMA annually reviews honoraria in the context of the budget. Therefore, the Committee recommends that Resolution T be rejected.

Resolution X
McCracken County Medical Society
Medical Staff Representation on the Hospital Governing Body

WHEREAS, the 1983 JCAH standards provide that physicians who are members of the medical staff shall be eligible for, and should be included in, full membership on governing bodies and their action committees in the same manner as are other knowledgeable and effective individuals, and

WHEREAS, the 1983 JCAH standards further provide that the hospital medical staff shall have the right of representation (attendance and voice) at meetings of the governing body by means of one or more medical staff members SELECTED by the medical staff, and

WHEREAS, governing bodies are refusing to accept medical staff representatives SELECTED by the medical staff, and appointing members without medical staff acceptance, now therefore be it

RESOLVED, that the KMA support the JCAH standards requiring the hospital governing body to accept medical staff representation on all governing bodies, and be it further

RESOLVED, that KMA be requested to prepare a legal analysis concerning the feasibility and methodology of achieving such requirements for hospital accreditation and license, and be it further

RESOLVED, that such report be mailed to all members of the KMA House of Delegates five months prior to the 1984 House.

Recommendations, Reference Committee No. 2:

The Committee considered Resolution X, Medical Staff Representation on the Hospital Governing Body, introduced by the McCracken County Medical Society, and recommends that the following changes be made. In the fourth line of the second "Resolved," the word "license" should be changed to "licensure," and the words "of all hospitals in Kentucky" should be added. In the second line of the third "Resolved," the words "five months" should be changed to "60 days." The amended "Resolveds" would then read as follows:

"RESOLVED, that KMA be requested to prepare a legal analysis concerning the feasibility and methodology of achieving such requirements for hospital accreditation and licensure of all hospitals in Kentucky, and be it further

"RESOLVED, that such report be mailed to all members of the KMA House of Delegates 60 days prior to the 1984 House."

[Speakers' Note—Estimated fiscal note of $2500]

The Committee recommends the adoption of Resolution X, as amended.

Resolution Y
McCracken County Medical Society
Medical Staff Self-Government

WHEREAS, self-government literally means government by one's members, and

WHEREAS, the essentials of self-governance are:

1. Bylaws which establish relationships with one's colleagues and the hospital and provide protection to members;
2. The authority to select and remove officers, grant them authority to represent the medical staff and to appointed department chairmen and others to carry out the business of the medical staff;
3. A dedicated administrative staff;
4. Access to independent legal counsel, and

WHEREAS, the 1983 JCAH standards provide that the governing body shall not unreasonably withhold approval of bylaws, rules and regulations, and

WHEREAS, the 1973 AMA House of Delegates stated that unilateral changes in medical staff bylaws by hospital boards of trustees are improper, and

WHEREAS, Kentucky statue 311.606 holds the organized medical staff INDEPENDENTLY responsible for its own acts, now therefore be it

RESOLVED, that the KMA be requested to prepare a legal and political analysis concerning:

1. The status of unilateral creation and amendment of medical staff bylaws and/or rules and regulations by hospital boards of trustees;
2. The status of unilateral creation and amendment of hospital bylaws by hospital boards of trustees and forced medical staff compliance with these bylaws;
3. The status of Kentucky statutes and regulations which hold the medical staff independently responsible for its acts (KRS 311.606), yet at the same time state that a medical staff may act only under the authority of the board of trustees (902 KAR 20:016), and be it further

RESOLVED, that such report be mailed to all members of the KMA House of Delegates five months prior to the 1984 House.

Recommendations, Reference Committee No. 2:

The Committee considered Resolution Y, Medical Staff Self-Government, introduced by the McCracken County Medical Society, and recommends that in the second line of the second "Resolved," the words "five months" be changed to "60 days." The amended "Resolved" would then read as follows:

"RESOLVED, that such report be mailed to all members of the KMA Delegates 60 days prior to the 1984 House."

[Speakers' Note—Estimated fiscal note of $2500]

The Committee recommends the adoption of Resolution Y, as amended.

Resolution Z
McCracken County Medical Society
Legal Representation for Medical Staffs

WHEREAS, a new environment now exists in medicine in Kentucky based upon changing fundamental differences and concepts of professional liability; public accountability of health institutions, applied medical staff discipline and anti-trust laws, and

WHEREAS, legal issues have become increasingly significant in all these areas, and

WHEREAS, the interests and needs of an organized and self-governing medical staff, its members and officers may be quite different and at times conflict with the needs of the hospital, and

WHEREAS, medical staff bylaws establish a legal relationship between the hospital and medical staff and place legal responsibilities on the medical staff beyond those of the hospital, and

WHEREAS, it is prudent to have separate legal counsel when:

1. The medical staff views an issue from a different perspective than the hospital (*eg*, certificate of need issues);
2. The medical staff is conducting disciplinary proceedings (so that the hospital attorney remains available to counsel the hospital board in its appellate capacity);
3. Medical staff officers determine that medical interests and goals are different than those of the

hospital board, now therefore be it

RESOLVED, that the KMA encourage organized self-governing medical staffs to make arrangements for separate legal representation.

Recommendations, Reference Committee No. 2:

The Committee considered Resolution Z, Legal Representation for Medical Staffs, introduced by the McCracken County Medical Society, and recommends that Resolution Z be adopted.

Mr. Speaker, I recommend the adoption of the Report of Reference Committee No. 2 as a whole.

Mr. Speaker, I would like to thank the other members of the Committee: William G. Uhron, M.D., Ashland; C. Dale Brown, M.D., Paducah; Richard S. Miles, M.D., Russell Springs; and Lynn L. Ogden, II, M.D., Louisville, for time spent in listening to testimony, and others who made comments at the Reference Committee Meeting. A special thanks to Mrs. Sharon Sellinger for her secretarial assistance to the Committee.

Reference Committee No. 2:
Sally S. Mattingly, M.D., Lexington, Chairman
William G. Uhron, M.D., Ashland
C. Dale Brown, M.D., Paducah
Richard S. Miles, M.D., Russell Springs
Lynn L. Ogden, II, M.D., Louisville

• Editorial Note: Unless otherwise indicated, the Reference Committee action on each report and Resolution was accepted as printed here. Any opposing action taken is stated in discussion following the item.

REPORT OF REFERENCE COMMITTTEE NO. 3

Sam D. Weakley, M.D., Louisville
Chairman

Reference Committee No. 3 considered the following Reports and Resolutions:

20. Report of the Maternal Mortality Study Committee
21. Report of the Committee on National Legislative Activities
22. Report of the Committee on State Legislative Activities
23. Report of the Committee on Impaired Physicians
24. Report of the Committee on Long-Term Care

Resolution B — Vision Retesting for Driver's License
(John E. Downing, M.D.)

Resolution D — Collateral Compensation
(Harlan County Medical Society)

Resolution E — Legal Disclosure and Informed Consent
(Harlan County Medical Society)

Resolution G — Abolishment of Punitive Damages in Liability Suits
(Campbell-Kenton and Boone County Medical Societies)

Resolution O — Driving While Under the Influence of Drugs and Alcohol
(Pennyrile Multi-County Medical Society)

Report of the Maternal Mortality Study Committee

The Committee met on September 21, 1982, during the Annual Meeting of the Kentucky Medical Association. Eleven cases from the previous several years were discussed and dispositions made.

Three cases were submitted to the *Journal of the Kentucky Medical Association* and one was accepted for publication.

John W. Greene, Jr., M.D., Chairman

Recommendations, Reference Committee No. 3:

Reference Committee No. 3 reviewed the Report of the Maternal Mortality Study with interest. The Committee recommends the report should contain information about the number of maternal/mortality cases per year and their nature, and that this information should be compared on a regional and national basis.

The Reference Committee recommends this Report be filed, and the recommendation of the Reference Committee be adopted.

Report of the Committee on National Legislative Activities

No definitive legislation affecting medicine has passed in this session of the U.S. Congress to date, but legislative activities on behalf of the profession were nonetheless intense.

Of most major concern was the carryover issue from the last session regarding the authority and efforts of

the Federal Trade Commission. After defeat by a narrow margin of an amended bill that would have limited FTC authority over the professions, the AMA and FTC officials developed a negotiated compromise that recognized the sanctionary responsibility of the profession to its members, as well as the preeminence of state licensing laws. However, the report of the House Committee on Energy and Commerce dealing with the AMA/FTC compromise incorrectly worded the agreement.

The House Committee report allowed the FTC to determine if state laws do "in fact" guarantee competition, which would give the FTC free rein to directly regulate the profession. The Committee members did not see the report as it was written after hearings had been conducted. The AMA is now making every effort to revise the situation before the bill goes to the floor for a full House vote.

Changes to the Medicare Program initiated by the President's Tax Equity and Fiscal Responsibility Act of last year also consumed a great deal of attention. A notable regulatory revision required that hospital-based physicians be reimbursed on a fee-for-service basis only for "hands on" care. Testimony and comments from the AMA and KMA, and an injunction filed by the College of American Pathologists, were not successful in preventing the regulations being promulgated, although they were significantly delayed.

In a related activity, regulations were published by the Health Care Financing Administration that would include allied practitioners in the definition of a physician as a condition for Medicare reimbursement to hospitals. As of this writing, these regulations have been successfully blocked.

Companion bills in both the House and Senate dealing with the "Infant Doe" issue were of considerable concern. Both bills would prevent the withholding of life support and other care to newborns with life-threatening congenital impairments. The bills, H.R. 1904 and S. 1003, were introduced after regulations published by the Department of Health and Human Services were declared to be arbitrary and capricious by a court. In a letter to Kentucky's Congressional delegation and members of the affected Committees in both Houses, KMA urged opposition, terming such situations as being "sensitive and traumatic, both to the families involved with the treating physician." Neither has been yet reported for floor vote.

A most recent bill of concern is H.R. 2490, which calls for public financing of Federal campaigns and a limit on Political Action Committee (PAC) activities. KMA urged Congressional opposition to this bill because it would limit participation in the political process and the political education benefits afforded by PACs.

The Annual KMA Washington Congressional Visitation and Dinner were held this year in June, and a very positive response was received by all of Kentucky's elected leaders and their office staffs. Unfortunately, however, participation by KMA representatives was not as positive as in years past, and some thought is being given to again making this a biennial event. KMA representatives who were present were quite effective and helped to cement what has been a long-standing close rapport with our delegation.

Any report on national legislative activities would be remiss without mention of the AMA Washington staff. These individuals have consistently maintained a high degree of effectiveness and professionalism in the most difficult of legislative circumstances.

Finally, I would like to thank the members of the Committee, the National Key Men, for all their efforts. In the AMA Washington Office, Kentucky is considered to be one of the most effective with its delegation. This is due in major part to the work of the Key Men, and all members owe them a debt of gratitude.

Fred C. Rainey, M.D., Chairman

Recommendations, Reference Committee No. 3:

The Reference Committee reviewed the Report of the Committee on National Legislative Activities. The Chairman should be complimented on the excellent job he is doing on a national level, and the Reference Committee would like to join him in thanking the National Legislative Key Men for their efforts.

The Reference Committee recommends this report be filed.

Report of the Committee on State Legislative Activities

The 1984 Session of the General Assembly is being fueled in large part with proposals generated from several different sources, including the State Health Plan, Governor Brown's Integrated Strategy to Address Health Care Costs, the Kentucky Health Cost Coalition, and the Interim Committee System.

The Interim Committees have conducted a detailed review of all health related bills which did not pass during the 1982 Session, and we will unquestionably

see many of these measures reintroduced in 1984. Among the more significant of these will be attempts to dramatically alter Kentucky's health care delivery system: to expand the role and area of practice of non-physician personnel; to call for mandatory reimbursement of these individuals through both private health insurance and governmental medical assistance programs; as well as measures calculated to alter a community's ability to expand its hospital services and facilities.

Based on KMA's experience during the past several Sessions, such an array of proposals cannot be considered abnormal. However, we must maintain additional concern in this instance for the proponents of such measures may enjoy the assistance of a new ally, the Kentucky Health Care Cost Coalition. This group, made up of business, industry and labor leaders from throughout the State, may provide an element of credibility for some of these programs that did not exist previously. This will make our task all the more difficult.

The State Health Plan and Governor Brown's Integrated Strategy provide additional springboards for experimental programs. The former, while a product of the bureaucracy, does carry the blessing of the Brown Administration which claims to be the advocate of a competitive and business-like approach to health care. The Plan now extends over a three-year period so it has the potential for greater long-term impact than the previous one-year plans. The Integrated Strategy is another product of State Government, and it calls for use of the leverage afforded by the States' multiple roles of payor, provider, consumer and regulator within the health care delivery system to affect changes which will curtail the growth of health care costs.

In the aggregate, we may well end up fighting battles which begin in the executive branch of government, the bureaucracy, the payor community, as well as non-physician providers who want to expand their areas of endeavor.

Therefore, while it would be nice to have a Session in which we could sponsor affirmative legislation in areas which need attention, it is doubtful we will enjoy such a luxury in 1984. There are simply too many areas where our resources will, of necessity, be deployed in a defensive posture.

However, at least one issue will get affirmative consideration. We anticipate the Uniform Determination of Death Act will be reintroduced during the upcoming Session. Regrettably, prospects for its passage are not good. The standing committee to which current House of Representatives rules indicate the bill will be assigned is dominated by individuals who feel this type legislation is potentially offensive to a "pro-life" stand and who have thus far associated this issue with that of euthanasia or death with dignity.

The Committee also continues to study the issue of collateral compensation, Certificate of Need Board legislation, and the Crippled Children's Program.

In previous reports I have noted that our leadership, Committee members and staff have done a tremendous job in handling the legislative efforts of this Association. At the same time, I have indicated that the most effective lobbying occurs at the grassroots, where physicians have **informed** discussions with officeholders. I still believe that. If you keep up to date on the issues, our official positions and the reasons for those positions, you can frequently assist a Legislator in understanding our reaction to a particular proposal.

Not so long ago I told the members of the Committee and the Legislative Key Men that I would be back seeking their assistance once again. That time has come. I hope your interest and commitment have not waned for circumstances indicate both may be taxed severely during the next few months.

Carl Cooper, Jr., M.D. Chairman

Recommendations, Reference Committee No. 3:

The Reference Committee reviewed the Report of the Committee on State Legislative Activities. The Committee expresses its appreciation to the author for his many years of service on behalf of KMA with regard to State legislative matters and thanks his Committee members, the State Legislative Key Men and KMA staff members who have worked so diligently.

Reference Committee No. 3 recommends this Report be filed.

Report of the Committee on Impaired Physicians

The Committee on Impaired Physicians was gratified this year to experience increased activity in identification of and direct involvement with our impaired brethren. However, identification and assistance in confirming impairments from local colleagues remain the greatest area of shortcoming in the Committee's work.

A portion of increased activity stemmed from direct referrals from the Board of Medical Licensure. That Board, composed primarily of physicians, recognizes

the special situation of individuals having health problems with which the Committee can validly assist. Similarly, it is obviously to an impaired physician's benefit to seek and make use of the Committee's efforts in lieu of harsher routes of intervention.

Continuing liaison with the two medical schools in the area of physician impairments was made, and it was most pleasing to note a number of activities taking place at the University of Kentucky College of Medicine. The College of Medicine was kind enough to host a meeting of the Committee in Lexington in November, where the chairmen of several departments were in attendance and explained departmental efforts in this area. Of particular interest was an Integrative Clinical-Pathological Conference consisting of cross disciplinary classes, which had substance abuse as a topic at a unique half-day meeting held in the spring. At the University of Louisville, reports have been received that some core curriculum hours will be devoted to substance abuse and impairment problems in the upcoming academic year.

Inquiries were received and liaison established with allied groups interested in forming committees similar to KMA's representing dentistry, pharmacy, nursing and the legal profession. In this area, one of the Committee members serves as an ex officio member of the Bar Association's group.

Internally, the Committee divided into subcommittees. These subcommittees are: Liaison with the Auxiliary, Liaison with the Board of Medical Licensure, Publicity, Speakers Bureau, and Confrontation.

In the area of publicity, the Committee has been quite pleased with the reponse of the **Journal** editors by placing monthly acknowledgements, as well as dedicating the May issue of the **Journal** to the Committee's work. The Committee's efforts were also the subject of publicity in the Louisville **Courier-Journal** in an article dealing with physician discipline. The gist of the article was less than positive, and less than complete, but even that publicity was considered by the Committee as favorable, as it did draw attention to the efforts of the profession. The Committee will again have a booth at the KMA Annual Meeting, and it is hoped that all attending will take the opportunity to stop by to speak with the Committee members.

Another internal step has been contact with the KMA Board of Trustees, including a presentation to the Board at its December meeting to establish a network of key men throughout the state to assist in confrontation and acquiring information from local communities on impaired individuals. The list of such key contacts is far from complete, and the Committee would urge anyone willing to assist to make your availability known.

In the area of the Speakers Bureau, Committee members have been asked to address some Trustee District meetings, county medical society meetings and meetings of hospital medical staffs, which they do voluntarily and at their own expense. Again, we would urge any group wishing a speaker on the subject to contact us so we can share our concerns, experiences and problems.

Several other internal procedures were refined, including the development of an Aftercare Contract, which an individual enters into on completion of his initial rehabilitation course. The Aftercare Contract consists of a moral document between the individual, an individual Committee member, and the Committee as a whole, and amounts to a mutual commitment to the individual's continuing rehabilitation and mutual concern.

Although an attempt has been made to chronicle the highlights of the Committee's activities, the actual work takes place on a day-to-day and night-to-night basis. The Committee must function by rules and procedures, but the bulk of effort takes place through individual Committee members. As a group, the Committee has had confrontation meetings with a number of individuals, yet some of the most effective work continues to be carried out through individual contacts.

A recitation of statistics on this subject is inappropriate, but, with humility, it is pleasing to report some successes. This sort of effort must be based on care and concern. Care and concern take time to develop.

As mentioned earlier, our major area of need is for help in identifying, acquiring information and confronting impaired individuals, and the Committee urgently needs the care and concern of every member to aid in this task. Punitive or sanctionary goals are still strongly refuted, and the Committee remains steadfast in its objective of help, rehabilitation and advocacy. We deplore the tendency of the media to publicly identify physicians we are trying to help.

The efforts of the Committee this year have at times been too starkly emotional and intense to offer any flowery homilies of appreciation. As Chairman, I can only offer a simple and heartfelt thank you to members for giving so much of themselves.

David L. Stewart, M.D., Chairman

Recommendations, Reference Committee No. 3:

Reference Committee No. 3 reviewed the Report of the Committee on Impaired Physicians and wishes to compliment the Committee on its excellent report, sympathetic involvement and increased activity.

The Reference Committee recommends this Report be filed.

Report of the Committee on Long-Term Care

The Committee on Long-Term Care is aware that a large portion of public financing of medical care is devoted to the long-term care industry. Both long-term care facility operators and physicians have recognized that society demands societal rather than medical care in many instances, yet various statutes and regulations require such facilities to provide a good portion of nonmedical care.

Both physicians and long-term care facilities would be directly affected by the State Health Plan developed this year, and a strong mutuality of interests exists. However, because of a construction moratorium on long-term care beds, there was little action by the Association and long-term care group.

As legislative and state government administrative events develop, common interests should continue to be pursued, and this liaison by the medical profession and long-term care industry should be maintained.

Robert E. Smith, M.D. Chairman

Recommendations, Reference Committee No. 3:

The Committee reviewed the Report of the Committee on Long-Term Care and recommends that the Report be filed.

Resolution B
John E. Downing, M.D.
Vision Retesting for Driver's Licenses

WHEREAS, Kentucky law allows renewal of driver's licenses without any retesting of physical ability, so that even legally blind Kentuckians can hold a valid driver's license, and

WHEREAS, physical abilities change with time, adequate vision is necessary for safe driving, and testing in other states has found that at least three percent of drivers tested have significantly decreased vision, and

WHEREAS, vision testing at the time of license renewal is relatively simple, inexpensive and identifies a large proportion of drivers with physical limitations, now therefore be it

RESOLVED, that the Kentucky Medical Association support legislation to require periodic retesting of vision, preferably at the time of each quadrennial driver's license renewal.

Recommendations, Reference Committee no. 3:

The Committee considered Resolution B, Vision Retesting for Driver's License, introduced by John E. Downing, M.D., and recommends that the phrase, "legislation to require" be deleted from the present "Resolved" and that a second "Resolved" be added, so that the "Resolved" section would read as follows:

"RESOLVED, that the Kentucky Medical Association support periodic retesting of vision, preferably at the time of each quadrennial driver's license renewal, and be it further

"RESOLVED, that the KMA carefully consider any legislation regarding the requirement for such retesting and take action as appropriate."

Reference Committee No. 3 recommends the adoption of Resolution B, as amended.

(Resolution B as amended was adopted, and is printed below in its final form:)

Resolution B (As Amended)
John E. Downing, M.D.
Vision Retesting for Driver's Licenses

WHEREAS, Kentucky law allows renewal of driver's licenses without any retesting of physical ability, so that even legally blind Kentuckians can hold a valid driver's license, and

WHEREAS, physical abilities change with time, adequate vision is necessary for safe driving, and testing in other states has found that at least three percent of drivers tested have significantly decreased vision, and

WHEREAS, vision testing at the time of license renewal is relatively simple, inexpensive and identifies a large proportion of drivers with physical limitations, now therefore be it

RESOLVED, that the Kentucky Medical Association support periodic retesting of vision, preferably at the time of each quadrennial driver's license renewal, and be it further

RESOLVED, that the KMA carefully consider any legislation regarding the requirement for such retesting and take action as appropriate.

Resolution D
Harlan County Medical Society
Collateral Compensation

WHEREAS, in an effort to decrease the cost of malpractice insurance, and

WHEREAS, the high cost of malpractice insurance increases the cost of medical care to the Citizens of Kentucky, and

WHEREAS, collateral compensation such as hospital insurance, unemployment insurance, sick pay benefits, etc., is not given consideration in malpractice awards by the juries and courts, and

WHEREAS, collateral compensation is prohibited as admissable evidence in a liability or malpractice case, thus allowing awards where the plaintiff had no expense, and

WHEREAS, the consideration of collateral compensation in malpractice cases would decrease the cost of insurance, thus lowering the cost of medical care, now therefore be it

RESOLVED, that the Kentucky Medical Association urge and support legislation in the Kentucky General Assembly to require the reduction of medical liability awards by the amount of collateral compensation the victim received (life insurance would be excluded from the compensation that would be considered).

Recommendations, Reference Committee No. 3:

The Reference Committee reviewed Resolution D, Collateral Compensation, introduced by the Harlan County Medical Society. The discussion was conducted with reference to information given to the Reference Committee by Legal Counsel and members of the Board of Trustees. The possibility of invasion of privacy and interference with private contractual agreements was discussed. Also, concern was expressed that if a jury's knowledge of collateral benefits payable to the plaintiff was deemed appropriate, plaintiff's attorneys might also call for similar disclosure of insurance coverage maintained by the defendant, thereby enhancing, rather than eliminating, the problem the resolution seeks to address.

The Reference Committee therefore recommends that Resolution D be rejected.

Resolution E
Harlan County Medical Society
Legal Disclosure and Informed Consent

WHEREAS, clearer efforts should be made to properly inform patients of the risks of certain invasive medical procedures, and

WHEREAS, such efforts would have an influence on the cost of medical care through a possible reduction of medical liability legal activities, now therefore be it

RESOLVED, that KMA support State legislation to create an advisory panel that would suggest which procedures require informed consent and which do not, and be it further

RESOLVED, that such a panel would develop guidelines for disclosure of possible unwarranted results and develop an appropriate disclosure form.

Recommendations, Reference Committee No. 3:

Reference Committee No. 3 reviewed Resolution E, Legal Disclosure and Informed Consent, introduced by the Harlan County Medical Society. After considerable discussion regarding this Resolution, the Reference Committee was informed of KRS 304.40-320, which addresses this issue and covers it adequately.

Reference Committee No. 3 therefore recommends the rejection of Resolution E.

Resolution G
Campbell-Kenton and Boone County Medical Societies
Abolishment of Punitive Damages in Liability Suits

WHEREAS, the Kentucky Medical Association recognizes the moral obligation and duty of Kentucky physicians to provide the best possible care at the most reasonable cost to the citizens of the Commonwealth, and

WHEREAS, the socioeconomic implications of the award of punitive damages in liability suits which are arbitrarily assessed, as opposed to adequate and fair compensation for injuries, has a negative impact on costs, now therefore be it

RESOLVED, that the Kentucky Medical Association seek support for and urge the passage of State legislation worded to the following effect:

I. Noneconomic losses, limitation of damages —

1. In an action for personal injury or wrongful death,

the plaintiff or his personal representative is entitled to recover noneconomic losses to compensate for pain and suffering, inconvenience, physical impairment, mental anguish, disfigurement, loss of capacity for enjoyment of life, and other nonpecuniary damages.

2. The amount of damages for noneconomic losses may not exceed $250,000.

3. This section shall apply to all causes of action pending on the effective date of this act.

II. Punitive damages; abolishment—

1. The Legislature finds that persons injured by the acts or omissions of others may obtain adequate and fair compensation for their injuries without resort to punitive damages; and, further, that uncertainty as to the standard for assessing punitive damages results in an increase in the resources consumed in litigation.

2. In accordance with these findings, no claimant in a civil action may claim or be awarded any amount for punitive damages against a defendant.

Recommendations, Reference Committee No. 3.:

The Reference Committee next reviewed Resolution G, Abolishment of Punitive Damages in Liability Suits, introduced by the Campbell-Kenton and Boone County Medical Societies. Reference Committee No. 3 appreciates the intent of the author of Resolution G and is quite sympathetic to this cause. However, there was some question about the constitutionality of this Resolution.

Therefore, Reference Committee No. 3 recommends that Resolution G be referred to the Board of Trustees for further legal study.

Resolution O
Pennyrile Multi-County Medical Society
Driving While Under the Influence of Drugs and Alcohol

WHEREAS, driving under the influence of alcohol or drugs poses a considerable risk to the American public, and

WHEREAS, the Pennyrile Medical Society in open meeting adopted a resolution recommending support of the concept of stiffer penalties for driving while intoxicated, now therefore be it

RESOLVED, that the KMA House of Delegates is asked to support the concept of "more severe penalties for those convicted of driving under the influence of alcohol or drugs," and be it further

RESOLVED, that this information be passed appropriately to the KMA Committee on State Legislative Activities, the members of the Kentucky General Assembly, and the Governor.

FISCAL NOTE: $100 - for duplicating and mailing correspondence

Recommendations, Reference Committee No. 3:

Reference Committee No. 3 reviewed Resolution O, Driving While Under the Influence of Drugs and Alcohol, introduced by the Pennyrile Multi-County Medical Society, and recommends it be adopted.

Mr. Speaker, I recommend the adoption of the Report of Reference Committee No. 3 as a whole.

Mr. Speaker, I want to thank the members of Reference Committee No. 3 who diligently considered the issues that were presented to us. They are Veryl F. (Skip) Frye, Somerset; Donald J. Swikert, M.D., Florence; J. Nicholas Terhune, M.D., Hopkinsville; and Gary R. Wallace, M.D., Lexington. I also want to personally thank Mrs. Doris Crume for her assistance in the preparation of this report.

Respectfully submitted,

Reference Committee No. 3:
Sam D. Weakley, M.D., Louisville, Chairman
Veryl F. (Skip) Frye, M.D., Somerset
Donald J. Swikert, M.D., Florence
J. Nicholas Terhune, M.D., Hopkinsville
Gary R. Wallace, M.D., Lexington

Report of the KEMPAC Board Chairman

Mr. Speaker, Fellow Delegates and Guests,

As chairman of the KEMPAC Board of Directors, I thank you for giving me this opportunity to report on KEMPAC activities this past year.

In the May Primary, KEMPAC supported candidates for the Senate of the Kentucky General Assembly and were very successful in helping elect qualified candidates. Our thanks to each of you who had a part in this accomplishment.

Candidate support committees are now working for candidates on the November ballot. I urge you to become involved.

Medicine in Kentucky Politics - Mid Eighties was the topic of the 21st KEMPAC Seminar held on Monday evening. We were fortunate to have Kentucky's gubernatorial candidates, Martha Layne Collins, Demo-

crat, James P. Bunning, Republican and Fred C. Rainey, M.D., AMPAC Chairman, as the speakers. The attendance was good and covered extremely well by the news media.

The good news is KEMPAC membership is approaching its goal of a 10% increase over last year's membership, but the bad news is that only 15% of Kentucky doctors are involved.

The participation of all of you leaders of KMA in KEMPAC/AMPAC is essential for us, as the political arm of medicine, to continue to grow.

The KEMPAC dues is $100 for Sustaining membership and $75 for Regular membership. If you have not renewed your membership this year, stop by the KEMPAC booth located out in the lobby and make your contribution.

In 1982, as in past years, the KMA House of Delegates reaffirmed its belief in the objectives of KEMPAC and AMPAC and recommended 100% participation by doctors and Auxiliary members. It further recommended a vote of endorsement and encouragement of the KEMPAC organization to continue its worthwhile political efforts on behalf of our free enterprise system and the freedom of the art and science of medicine.

I recommend that you reaffirm this endorsement and approve KEMPAC billing with the KMA 1984 dues billing. I wish to ask that you include your contribution when sending in your other dues. This is your organization and your support is needed.

On behalf of the KEMPAC Board, I wish to thank you delegates, the KMA Board of Trustees, the Auxiliary to KMA and staff for your help and support.

Following Doctor Harrison's presentation, a motion was made, seconded, and carried to adopt the KEMPAC Report.

• Editorial Note: Unless otherwise indicated, the Reference Committee action on each report and Resolution was accepted as printed here. Any opposing action taken is stated in discussion following the item.

REPORT OF REFERENCE COMMITTEE NO. 4

John D. Perrine, M.D., Lexington
Chairman

Reference Committee No. 4 considered the following Reports and Resolutions:

25. Report of the President, Blue Cross and Blue Shield
26. Report of the Committee on Medical Insurance and Prepayment Plans
27. Report of the Committee on Claims and Utilization Review
28. Report of the Coordinating Commission on Peer Review Activities
29. Report of the Committee on Health Care Costs
30. Report of the Committee to Investigate Changing Trends in Medicine

Resolution H — Blue Cross and Blue Shield Preadmission Review
(Jefferson County Medical Society)

Resolution I — Automatic Direct Payment of Major Medical Benefits
(Jefferson County Medical Society)

Resolution J — Report D, AMA Council on Medical Services
(Board of Trustees)

Resolution M — Medicare/Medicaid Hospital Preauthorization Programs
(Board of Trustees)

Resolution P — UCR vs. Indemnity Reimbursement
(Campbell-Kenton County Medical Society)

Resolution Q — Medicare/Medicaid Preauthorization Certification Programs
(Campbell-Kenton County Medical Society)

Resolution R — Medicare/Medicaid Hospital Preadmission Authorization
(Calloway County Medical Society)

Resolution U — Blue Cross and Blue Shield Preauthorization Program
(Fayette County Medical Society)

Resolution W — Third-Party Peer Review
(Board of Trustees)

ITEMS FOR CONSENT

Reference Committee No. 4 reviewed the following items and recommends they be filed as indicated, by the consent of the House, without discussion:

25. Report of the President, Blue Cross and Blue Shield—filed
27. Report of the Committee on Claims and Utilization Review—filed
28. Report of the Coordinating Commission on Peer Review Activities—filed
29. Report of the Committee on Health Care Costs—filed

Report of the President, Blue Cross and Blue Shield

This report provides the House of Delegates of the Kentucky Medical Association with a status of activities of Blue Cross and Blue Shield of Kentucky (the Plan).

Like many other businesses, the Plan has been affected by the economic conditions, including a continuing high unemployment rate, business closings and layoffs, high interest rates, and the lack of business expansion. However, the Plan remains strong, both financially and in the marketplace. The corporation's contingency reserves as of May 1983, represent 2.27 months of average benefit and operating costs. Currently, we have 1,371,091 members enrolled, representing 36% of Kentucky's population.

In 1982, claims payments for both our private and government business increased to over $989 million. The Plan's private business reimbursed all providers of health care more than $490 million, including $175 million for professional services. As fiscal intermediary for Part A of Medicare, the Plan reimbursed providers $467 million for services rendered to Medicare beneficiaries. Since becoming the administrator for Part B of Medicare on October 1, 1982, the Plan reimbursed providers for professional services over $32 million.

The demand for Usual, Customary and Reasonable benefits continues to be very high in the marketplace. Currently, over 535,000 members are covered by the UCR benefits programs. Payments for UCR services in 1982 exceeded $60 million. Recently, a number of groups have requested a change in the design of benefits from full UCR programs to a percentage program. These requests are made as an attempt by the group to make the member more aware of the cost of professional services, and through the sharing of these costs, to become more prudent in the use of these services. This change is affecting both National Accounts and local business. As a result of the new benefit design, a new Participating Physician's Agreement was developed in early 1983. The new Agreement applies to both full and percentage UCR certificates, while using the same administrative procedures, including fee profiles. More than 76% of the physicians practicing in Kentucky have signed the new agreement.

During May and June of 1983, Blue Shield workshops were conducted in 14 locations throughout the State. Over 1,300 medical assistants attended these workshops, which included presentations on how to submit claims, the major benefit programs available, the new Comprehensive Major Medical benefit program, and administration of the UCR programs, including the revised remittance advice. Comments received from those in attendance were very positive.

The Plan is involved in several activities which will impact on physicians in Kentucky and on the operation of the Plan. Some of the major activities are as follows:

- The Plan has just been awarded the continuation of the contract for the employees of the State of Kentucky and Boards of Education. This contract contains many cost containment provisions that have not been a routine part of the Plan's benefit structure.
- A pre-admission certification program (Assurance Plus) was implemented on July 1 in a selected community and will be expanded statewide in the next few months. This program is one of the cost containment activities being requested by major groups and holds the potential for signficiant savings. The key element in the program is to determine the appropriateness of admission and to establish an expected length of stay based on medical criteria. The program will apply to all elective admissions and excludes maternity, emergencies, or psychiatric cases. The Assurance Plus Program has been discussed with the Kentucky Medical Association Board and with the Committee on Insurance and Prepayment Plans, and this Committee has been asked to assist in refining the necessity of admission and the length of stay.
- The Plan is in the process of developing an integrated membership billing and claims processing system. This system, when fully operational, will permit the Plan to process Major Medical and other claims more efficiently and will eliminate the need for several claim forms. This is a very costly en-

hancement for the Plan, and it is scheduled to be phased in in December of 1984.

- The Provider Communications Network (PCN) is a paperless processing system that will accept claims from providers through the tape-to-tape, the computer-to-computer, and through CATHODE ray tubes. Currently, 23 hospitals and 5 physicians' offices and/or clinics are submitting private or government claims through this system. Program expansion to physicians' offices with the highest claims volumes will begin in October of 1984.
- Another phase of the Medical Necessity Program has been announced nationally and will be implemented in Kentucky later this year. The new phase deals with respiratory therapy, and the guidelines to be followed have been sent to various KMA committees for their comments. Implementation of this new phase is scheduled for early 1984.
- In recent weeks the Plan has been advised by a number of hospital-based physicians that separate billing arrangements are being considered. These arrangements are the result of TEFRA changes which limit reimbursement that hospital-based physicians can receive through the Medicare Program. This activity is a major concern of the Plan because of the anticipated increase in the volume of claims to be handled and the potential increase in benefit costs for covered services. Discussions are presently underway with specific physician groups that are affected by these changes.

The variety of activities discussed reflects the continued emphasis on cost efficiency in today's health care system. Blue Cross and Blue Shield of Kentucky will continue to work with the providers of health care and our subscribers as the buyers of health care to develop programs designed to provide comprehensive, yet affordable health benefit plans.

Report of the Committee on Claims and Utilization Review

The Committee on Claims and Utilization Review has undertaken a number of changes this year to reflect the changing pattern of need for review. This has been the result of increased activities on the part of the Board of Medical Licensure and the termination of fee review by all KMA groups.

The Committee has continued to meet regularly, and has recently established a schedule of meetings annually. Most cases reviewed relate to questions of appropriateness of care and services provided. A recent trend, however, has been the referral of several claims regarding abberant practice patterns.

While the Committee, through the Association, has no formal or statutory authority, the members very strongly feel an obligation to the membership and the entire medical profession to act as a forum for adjudication of medical practice questions. It has been proposed that new reimbursement methods being developed by the Federal Government, insurance carriers and even physician groups may obviate the need for the Committee's work; this view is refuted.

The KMA peer review system was established based on local review being the most appropriate method of quality assurance, with a state level group to act as an administrative coordinator for these activities, as well as an appeals level. It is the opinion of the Committee that this concept remains quite valid, and the Committee's work is even more critical in this time of dramatically changing practice and reimbursement methods.

The most vital role that the Committee should and does fulfill is to act as an educational vehicle for medical practice. The Committee does not act primarily as a sanctionary group, but serves to answer honest questions of medical practice, and to seek to point out and resolve outmoded and inappropriate treatment regimens. In rare cases, instances of intentionally inappropriate or inept treatment are discovered, and the Committee feels obligated to take necessary referral measures at times. Although these instances are minimal, their vigorous address is seen as one of the Committee's direct responsibilities.

Fee review was discontinued because of court rulings and Federal Trade Commission activities last year. Since then, new developments have occurred in both the legal and administrative areas, nationally, that provide some possible basis for limited fee review being reinstituted. This issue is being investigated closely, and further consideration by the Board of Trustees in the future is anticipated.

The work of the Committee continues to be time consuming, involved, and often frustrating, given the complexity of modern medical practice and modern regulations and reimbursement techniques, yet it is a rewarding effort. I would like to extend my thanks to all Committee members who have so sincerely devoted their time and interests to these goals.

K. Thomas Reichard, M.D., Chairman

Report of the Coordinating Commission on Peer Review Activities

The Coordinating Commission on Peer Review Activities is a five-member group consisting of the Chairmen of the Judicial Council, Claims and Utilization Review Committee, and Committee on Impaired Physicians; the Vice Speaker of the House of Delegates; and a member of the Board of Trustees. The purpose of the Commission is to oversee all physician review efforts of the Association and to direct questions to the appropriate resource for resolution.

This year, two issues have arisen which the Commission will be giving ongoing study. The first is the feasibility of resuming fee review, which was terminated in September of 1982, because of court rulings. More recent court decisions, as well as actions by the Federal Trade Commission, have provided a climate that might potentially allow resumption of fee review efforts. The Commission will give this area further study and make recommendations to the Board of Trustees later in the year.

A second issue for the Commission's attention has been the conduct of private or commercial review activities. Because of attention to increasing medical costs, not only the government but many large employers in the state are considering imposing on-site concurrent review, and other types of review, on medical services rendered to their employees. Electronic Data Services, a national-scope claims administration company, now administers the Medicaid and Food Stamp Programs for the state, as well as selling private review services in other states. The Kentucky Peer Review Organization and other companies in the state have secured contracts with private employers for review services. Issues to be studied in this area are: the impact of private review on the physician/patient relationship; the role of hospital-appointed utilization review committees in relationship to private review efforts in hospitals; the effects of competition between companies which market private review services on overall hospital care; and others.

As material and recommendations are developed, these will be forwarded through the Board of Trustees for information and any action deemed appropriate by the Association. The Commission solicits views or input from the membership on these issues.

Glenn W. Bryant, M.D., Chairman

Report of the Committee On Health Care Costs

1982–83 has been the year of the "Coalition" in the health care cost arena. As many of us have known, some of the payors of health care bills have become quite concerned about the rising costs for health care in their corporate structures. In 1982, under the stimulus of Governor Brown and Secretary of the Cabinet for Human Resources Stumbo, a coalition of Health Care Payors was formed on a statewide basis. This Coalition produced a report toward the end of 1982, with a number or recommendations for modification of the health care system, that was distributed widely. Among the recommendations of the original report was one suggesting that the Coalition's membership be broadened to include providers; on January 1 of this year the Coalition did indeed drop its state sponsorship, at least nominally, and broadened its base to include health insurance personnel, hospital personnel, and physicians.

Because of our work on the KMA Committee on Health Care Costs, we were allotted one seat at the Coalition table, and we have worked with the group since that time. Two major challenges have arisen: 1) A "challenge" was received from Governor Brown and his Cabinet Secretary, Mr. George Fisher, to participate in a state health care cost reduction plan (failure to participate was to lead to fee regulations via legislation!). The State proposed that physicians bring about a reduction in the rate of rise of health care costs of some $21 million during the next 12 months. This $21 million "savings" was to be matched by equal savings from the hospital group and from the consumer/management/labor group; and the State felt that it also could attempt to effectuate savings of many millions more than that (primarily by tightening up the payout mechanisms for its State employees).

After consultation with our KMA Board, we offered a proposal that will attempt to meet this goal by maintaining the physicians' average rate of rise in fees at the level of the "all services component" of the CPI during the next 12 months, and by reducing the average length of stay of patients in Kentucky hospitals by .14 days during the same period. This should not be hard to do, as physicians' fee increases have been essentially at the level of the all service component of the CPI for the last several years; and the general state of the economy, plus the upcoming advent of diagnosis-related group reimbursement, promises to cut length of stay a mod-

erate amount in its own right. Nonetheless, we as physicians will need to be aware of these commitments, and I hope we can work together to achieve them.

2) The second major challenge that we have faced as members of the Coalition was the Coalition staff presentation of a grant application (to the Robert Wood Johnson Foundation) for funds to develop a reimbursement rearrangement concept called "Physician Based Group Insurance," which essentially bases insurance premiums on physicians' financial practice patterns rather than on the actuarial experience of a group of patients. This program was, in my mind, not adequately described to the Coalition members before grant application was made; and inasmuch as it involves pilot programs in the Louisville area which contain the potential for rather drastic reorganization of the reimbursement structure, I believe this program will require very careful watching. I'm not sure yet whether we as organized medicine can support this. Probably by the time you read this report the program will be much more familiar to you than it is at the time this report is being written!

Overall, the direction of the Coalition may be changed considerably pending the political reorganization which is bound to occur in Kentucky in the next six to twelve months. We will be watching these developments, of course.

On behalf of the members of the Committee on Health Care Costs, who have been uniformly outspoken, concerned, and productive of intelligent and effective ideas, I should like to thank the hard-working and equally effective KMA staff personnel, particularly Bill Applegate and Bob Klinglesmith, for working in a complex field against tight deadlines, with excellent results.

Walter I. Hume, Jr., M.D., Chairman

End of Consent Calendar Items

Report of the Committee on Medical Insurance and Prepayment Plans

The KMA Committee on Medical Insurance and Prepayment Plans held three meetings last year, November 10, 1982; March 29, and May 17, 1983.

All three meetings revolved around two major items: the KMA group insurance plan and the State employee contract with Kentucky Blue Cross and Blue Shield.

KMA endorses a Blue Cross and Blue Shield group plan for KMA members featuring a choice of a high option or low option. For several years, the high option was a UCR type coverage with major medical and full payment for a semiprivate room. The low option differed from the high option only in that the physician payment part of the coverage was a fee schedule rather than UCR.

Over the past few years there has been a gradual change in the KMA plan from one of full payment for services to one which features some degree of cost sharing. This is a result of interest expressed by members for a plan with a deductible and other cost sharing features which would result in a lower monthly premium. In response to that interest, and interest from the business community, Blue Cross and Blue Shield developed its Comprehensive Major Medical Plan. In 1982 the UCR coverage was offered as the high option with the Comprehensive Major Medical offered as the low option. There were some problems with both options. In the UCR plan, utilization resulted in higher premiums, causing some members to withdraw from the plan. In the low option, the degree of cost sharing ($300 per person) was so great that a number of groups opted out of the program. In 1983 changes were made in the low option plan, resulting in a lower deductible, which seems to have greater acceptance by those participating in the low option.

We reported to you last year that the Committee had undertaken a detailed study of the KMA group program to see if any patterns of improper utilization existed. No evidence of inappropriate utilization was found. Our review continued through this year, and our findings were basically the same as reported to you last year. There was some change in that the number of surgical procedures went up, while the number of medical cases decreased. There was no apparent reason for this change. The percentage of short stay admissions decreased from 65% of all cases earlier this year, to a level in early spring of 44%. The average length of stay decreased a small amount, while the average cost per case increased and continues to be higher than the statewide average.

The Committee also found high usage of obstetric services. However, this is not surprising, taking into account the high number of female employees working in physicians' offices. We also noted that physicians as patients had a comparatively high utilization of ancillary services. This may be explained by the fact that physicians generally are hospitalized only in extreme cases and often require more inpatient services. As a result of our study, the Committee feels comfortable with the utilization patterns of the group and is of the

opinion that the increase in rates reflected increased utilization of the program.

Our Committee discussed various options for 1983. One option was to continue the UCR program with full semiprivate room coverage for 120 days plus major medical. However, it was noted that the continuation of that coverage would also require a 20% increase in premiums.

The second option was a program which would pay the first $2,000 of hospital costs in full; and after the first $2,000 had been paid, it would pay 80% of the next $6,200. The program would then pay all following costs up to $1,000,000. It was noted that KMA's current average cost per case for hospital services is less than $2,000; thus, the majority of hospital cases would be paid in full under this contract. There is a $100 per person, $300 per family deductible on surgical and medical charges, after which covered charges are reimbured at 80% of UCR.

The third option we discussed was to continue the Comprehensve Major Medical coverage, but modify the deductible to $100 per person and $300 per family, and change the stop loss from $8,000 to $5,000. The Board ultimately chose options two and three for 1983, and these are currently in effect. It should be pointed out that groups of five or more who prefer to participate in the UCR program still have it available to them outside the KMA group.

At the beginning of the enrollment period in February of 1983, there were 250 KMA groups in the low option, and 630 in the old UCR high option. As of this writing, there are 268 groups in the low option, and 559 in the high option. Presumably, the 71 groups who left the high option continued their UCR coverage within a small group plan. The Committee is most interested in the feelings of the members with regard to the KMA endorsed group insurance program. It is our desire to make a high quality comprehensive plan available to the membership at a reasonable cost.

Last year the House of Delegates went on record calling for psychiatric services to be paid for at the same level as other physicians' services. The Committee is pleased to report that KMA's current Blue Cross and Blue Shield coverage provides for psychiatric services to be reimbursed at the same rate as other physicians' services.

The Committee spent a great deal of time discussing the State Employee Health Insurance Plan which was implemented in October of 1982. That plan includes a number of cost containment provisions, several of which are extremely controversial. Representatives of KMA, including our Committee, met with representatives of the State Department of Personnel to discuss the more controversial of those provisions. Those include mandatory outpatient hernias, tonsillectomies and adenoidectomies, mandatory second opinions for selected procedures, and incentives for early maternity discharge.

Ms. Katherine Culbertson and Mr. Harold Newton, from the Kentucky Department of Personnel, met with the Committee on November 10, 1982. Also in attendance were officials of Kentucky Blue Cross and Blue Shield. The State officials noted that the State pays premiums for single contracts, and employees pay the difference between single and family rates out of pocket. The State had received a 38% increase in 1982, which affected not only the State as an employer but individual workers as well. The Personnel Department felt it was faced with a situation that demanded cost reductions, which resulted in the cost containment aspects of the new contract. The State chose to implement some cost control techniques in Kentucky which had been reported as successful in other areas of the country.

There was considerable discussion regarding all aspects of the cost containment program, and the Committee vigorously recommended that the State delete its outpatient requirement for T & As and hernias. The Committee felt the decision as to the location in which a service is performed should be made between the patient and the physician based on medical judgment and not solely on cost considerations. Unfortunately, our recommendations were unheeded by the State, and the program remains in effect largely unchanged. President Blackburn, on behalf of the KMA Board, has expressed KMA's concern with the State Plan, which is administered by Blue Cross and Blue Shield. Letters were sent to Governor Brown, Secretary Adams, and Personnel Commissioner Maynard. Replies to those letters indicate appreciation for KMA's interest but did not result in invitations to be part of any discussion regarding modification of the plan.

At the time this report is being written, we are able to report on the result of those cost containment provisions for the first quarter of 1983. There were 31 cases of early maternity discharge within 48 hours of delivery, which resulted in the State reporting savings of $4,867. Five patients were discharged within 24 hours for a savings of $1,431. In second opinion surgeries, there were 458 claims that required second opinions. Nine claims were reduced by a total of $7,178.28 be-

cause patients did not obtain second opinions. $19,385 was paid out in the first quarter for second opinion consultation fees.

There were 224 early admission claims, of which 24 were adjusted because physicians could not justify the patient being in the hospital more than 24 hours prior to surgery. Thirty-seven early admission days were denied, totaling $8,833. Patients were held responsible for payment of those charges.

There were 101 surgery claims for which reduced benefits were paid because the procedures were not performed on an outpatient basis, typically because the patient failed to have the attending physician obtain the necessary authorization to have the procedures done as an inpatient.

Blue Cross officials advised that the cost containment provisions of the State Employee Plan resulted in a total savings of $45,900 for the first quarter of 1983.

Kentucky State Government, through the Cabinet for Human Resources, has announced other proposals for cost containment which include equal payment to all providers regardless of training, expansion of the scope of practice for nonphysician personnel, and incentives for employees to use nonphysician providers. KMA will continue to monitor those proposals and address them as is indicated. It is anticipated that many of these issues will be discussed during the Kentucky General Assembly.

The Committee also discussed the movement of the Kentucky Peer Review Organization into private review. Health costs are such today that businesses are looking for any way possible to cut cost while maintaining quality of care. While some feel that KPRO is not an appropriate agency to perform such review, it appears that some sort of reviewing of private patients will become more and more common both locally and nationally.

Blue Cross and Blue Shield reported to the Board of Trustees that it is actively working on the development of a preadmission authorization program. Such a program was included as a requirement to bid by State Government during the bidding process for the State Employee Contract last year. Although not supportive of the concept of preadmission certification, the Board of Trustees felt that if a preauthorization program was inevitable, it would be to the benefit of the membership to participate in its development rather than have someone else develop a program without physician input. Representatives of Blue Cross and Blue Shield met with the Committee in May to discuss their ideas for a preauthorization certification program.

As a result of that meeting, the Committee suggested that the Interspecialty Council might be a more appropriate group to work in this area because all medical specialties are represented. It was noted during the meeting that plans were for the program to be initially implemented at Kings Daughters Hospital in Frankfort on July 1, and it was anticipated that ten to fifteen additional hospitals would be in the program by October 1.

While still open to modification, the plan would basically operate as follows. There would be a toll free line to a nurse at Blue Cross and Blue Shield who would authorize routine elective admissions based on predetermined criteria. A determination would be made at that time as to the length of stay required for the patient. If the patient remains hospitalized at the end of the approved length of stay, concurrent review will take place to determine if the length of stay should be extended.

Preauthorization certification will not be necessary for maternity, psychiatric, or emergency admissions. According to Blue Cross and Blue Shield, 80% of the total number of patients admitted per year in Kentucky hospitals are elective admissions. Of those elective admissions which will require preauthorization, 80% are expected to be approved. The other 20% will be questionable, requiring a physician at Blue Cross and Blue Shield to be consulted before admission can take place. If the admitting physician and the Blue Shield physician disagree regarding admission, some type of yet to be determined appeals mechanism will be utilized.

The Committee had some concern with the program as described. Physicians will have to take time to explain to office personnel detailed reasons for hospitalizing patients so those personnel can, in turn, call Blue Shield to get approval. Most Committee members felt that the amount of information they now give their office personnel would probably not be sufficient under the Blue Cross and Blue Shield proposal to obtain admission approval. This will necessarily take time away from patient care.

Another problem identified is that Blue Shield personnel will only be available by telephone during their normal working hours, which are approximately 40 hours per week and no weekends. This is a potential problem mainly because those physicians living in the central time zone will have a very limited amount of time per day in which to contact Blue Shield by telephone.

Blue Shield feels a preauthorization program will be helpful in eliminating retroactive denials of payments. Blue Cross and Blue Shield anticipates that most of the cases that are retroactively denied now will be caught before hospital admission occurs.

Our Committee disagreed strongly with the concept of preauthorization certification but felt, given the cost containment climate of today, this type of program will eventually be used by many carriers, which could result in each carrier developing its own criteria. It is the Committee's feeling that in order for the concept of a preauthorization program to be workable, there should be uniform criteria developed by physicians which would be used by all carriers.

As Chairman, I would like to thank the members of the Committee for their participation this year. They have given freely of their time and have dealt with difficult and controversial issues.

Earl P. Oliver, M.D., Chairman

Recommendations, Reference Committee No. 4:

Reference Committee No. 4 next reviewed the Report of the Committee on Medical Insurance and Prepayment Plans and would like to commend Doctor Earl Oliver and his Committee for the work which they have done and the information which they have provided in their report. Reference Committee No. 4 recommends that Report No. 26 be filed.

Report of the Committee to Investigate Changing Trends in Medicine

The last 50 years have seen major changes in technological advances in medical care delivery. In the past 20 years there have been changes in the way care has been paid for; *ie*, the emergence of the third party, both private and governmental.

Trends indicate other major changes are beginning to take place in which:

- Non-physicians are taking a greater role in determining how medicine will be practiced, how it will be paid for, and how much will be paid for medical care.
- Business coalitions are making concerted efforts to lower corporate costs through negotiations with hospitals and physician groups, and by seeking positions on hospital boards. Private business is contracting for review of their health care costs.
- Legislation passed in California has legalized the corporate practice of medicine.
- The public has indicated a desire to limit what funds it will make available to government, which translates into less money for government employee benefit plans; limits on Medicare/Medicaid and other government funded programs; and the business community is no longer willing and/or able to make up the deficit.
- Interest in self-insurance programs has increased significantly by companies both individually and collectively.
- The public is demanding more cost accountability from providers while the Federal Trade Commission and the court system have established policies that for all practical purposes end fee review.
- Congress has made changes in hospital-based physician reimbursement under Medicare, implemented diagnosis-related groups for Medicare hospital reimbursement, and is studying the feasibility of applying them to physician reimbursement.
- Nonphysician providers are making inroads based on cost considerations. They are selling the idea that they can do a lot of things cheaper than physicians and are claiming that there is no lessening in the quality of care.
- There has been an increase in the number of physicians participating in group practices.
- Most physicians feel there are more than enough practitioners in their communities, but the public does not feel there is an overabundance of doctors.
- Organized medicine has not been effective in dealing with nonmember aberrant physicians for reasons largely beyond its control.
- The increase in the number of physicians has resulted in greater competition for patients and greater competition for exclusive in-hospital contracts. It has also resulted in the establishment of alternate delivery systems such as free-standing emergency clinics; preferred provider organizations; ambulatory care (primary and surgery) centers; primary care networks and physicians' alliances; and hospital owned clinics for minor injuries and medical problems. There is a growing number of salaried physicians with different values and expectations than self-employed physicians.
- Females now comprise more than one-fourth of the nation's medical school classes. Thus, a signifi-

cant number of the future membership in organized medicine will be female.

- The population is getting older, but the overall American birth rate has leveled off. The elderly use more care across the board, and thus more funds, while at the same time there will be fewer people in the work force paying taxes to fund governmental medical programs. By the year 2015, the ratio of workers to retired will be 2:1.
- Ethical questions will have to be addressed concerning the prolonging and quality of life versus dollars spent.
- The economy is changing from industrial-based to service-based.
- Hospitals may compete with physicians through closed medical staffs and contracts with employers, unions, and government organizations.
- Hospitals may compete with physicians by employing physician extenders, eg, CRNAs.

These issues led the Board of Trustees to appoint our Committee last December and give it the following charge: study and report on evolving delivery and payment mechanisms; study and report on demographic trends affecting medical practice; study and report on ethical questions regarding financial considerations versus quality of life; investigate trends in cost containment activities; and determine to the extent feasible the future role of organized medicine in this changing environment.

Committee members were appointed based on a desire to assemble a group representative of several specific areas concerned with and involved in different trends in medical practice.

The Committee prioritized and addressed four major topics this year: competition in medicine, the emergence of the free-standing clinic, the preferred provider concept, and a study of the practice plans of residents and third and fourth year students at both State medical schools.

Douglas E. Hough, Ph.D., Director of the Department for Health Resource Analysis at the AMA, made a presentation to the Committee on competition in medicine.

While many people generally think of competition only in terms of price, there are several other facets of competition in medicine such as, for example, quality of care, waiting time, and other amenities for patients. Just as in other areas, a large number of sellers and buyers in the market is necessary for competition to occur. A few sellers will control the market, a large number of sellers will generate heavier competition.

Patients must be sensitive to the price of their medical care, or competition will not take place. With more people becoming directly responsible for a larger percentage of their medical bills as a result of changing trends in medical insurance, they are becoming much more sensitive to what price they are being charged. The constant rapid rise in health costs and the increasing number of physicians entering practice is resulting in increased competition among physicians for the "buyers" of their services.

One of the results of that increase in competition is that the nature of practice opportunities is changing. Physicians are now more likely to accept salaried positions when they enter practice. Group practice is increasing while the number of solo practices are declining. (Our own survey of residents and third and fourth years medical students at U of L and U of K indicated that none of the respondents intend to go into solo practice.) Doctor Hough felt that experiments with delivery mechanisms will increase significantly in the next few years. Competition is resulting in changes in reimbursement from fee-for-service to prospective reimbursement. There is also a trend toward decreased specialization. The generalist will do more specialized work and the specialist will do more general work.

Those that may be affected most by competition are the young physicians just beginning practice and older physicians. Younger physicians are having a much harder time establishing practices due to the large number of doctors who have entered the market in the last ten years. In addition, it is more difficult today to obtain loan money to set up new practices. Older physicians are faced with increasing changes in health care delivery methods and simply may not want, or be prepared, to deal with those changes.

Doctor Hough illustrated the results of a quarterly survey through the AMA's Socioeconomic Monitoring System. Physicians from across the country were surveyed on changes that have occurred between 1970 and 1982 with regard to fees, visits, and income.

It was found that while physicians' nominal income grew since 1970, real income declined slightly as a result of inflation. However, deferred income was not considered and may alter these results significantly. Practice expenses are increasing more rapidly than physicans' incomes. While net income increased by 8.7%, expenses increased by 11.8% in the period sur-

veyed. Malpractice claims are increasing at double the rate of five years ago, from 3.2% to 6.7%.

The average medical school debt for a doctor out of school for two years is $20,200. This, along with the difficulty of establishing a new practice, has made salaried positions much more attractive to new physicians. In 1969, 22% of all physicians were in group practice: in 1980, 38% were in group practice.

Ninety percent of the doctors surveyed felt that the staff at their hospital was sufficient, with 17.4% reporting that at least one segment of their staff was closed to new doctors.

Because of increased involvement by hospitals in ambulatory care, 18% of respondents considered the hospital to which they admitted patients a competitor. Of all ambulatory surgery, 54.5% is performed in hospitals; 3.4% in ambulatory surgery centers; and 37.7% in doctors' offices. The movement seems to be toward ambulatory surgery in the physician's office.

The survey showed that doctors are becoming much more aware of marketing techniques and are beginning to market themselves. Many doctors are becoming involved in some marketing strategies, particularly younger physicians.

Our second area of study concerned the recent emergence of the "free-standing clinic."

For the purpose of this report, free-standing clinics will include both free-standing emergency clinics (FECs) and free-standing primary care clinics.

Nationwide, there are currently some 700 such clinics in operation with projections of 1,200 by the end of 1983. The National Association of Free-standing Emergency Centers estimates current patient volume at 12 million patients per year with $500,000,000 in annual revenue. Of interest, the current total annual expenditure in outpatient care in the U.S. (physicians' offices and hospital emergency rooms) is approximately $25 billion.

Currently, Humana operates 60 clinics under the name MedFirst. Humana expressed great interest in this concept several months ago and initiated a program to develop 500-600 such clinics. Most of their existing clinics were purchased rather than built and are located primarily in cities where Humana does not own hospitals. Recent information would suggest that their experience has been less profitable than initially anticipated, and it is doubtful that they will develop their clinics beyond a total of about 100.

The average start up cost for these clinics is $400-$500,000 with monthly overhead of $25-$35,000. At current charges, the facility must see 40 to 50 patients per day to be profitable. Staffing and hours of operation vary widely, and the majority offer extended hours, but have less than 24-hour service.

There remains considerable controversy over free-standing emergency clinics: but thus far little regulatory legislation has been enacted, although several states are currently considering such legislation. The AMA has not taken a position as favoring or opposing these clinics, but has suggested guidelines for those clinics describing themselves as emergency clinics. As a result, the National Association of Free-standing Emergency Clinics has filed a complaint with the Federal Trade Commission against the AMA. There are both advantages and disadvantages to this new dimension in health care delivery.

The following are some stated advantages of free-standing clinics:

1. Extended hours.
2. Convenient location.
3. More rapid service.
4. Walk-in service without appointment.
5. Less expensive than hospital emergency rooms.
6. Increased quality of care by attracting the 30-35% of the population that does not have a primary care physician as well as those patients fearful of hospital emergency rooms.
7. May force primary care physicians to extend their hours, spend more time with patients, and generally provide a higher quality of care because of competition.
8. Competition for minor emergency patients may force closure of some hospital emergency rooms, thus lowering overall health care costs.

Opponents of free-standing clinics offer the following disadvantages to these centers:

1. Lack of continuity of care.
2. May mislead patients by implying that they can handle major emergencies, thus delaying definitive care.
3. More expensive than primary physician office care.
4. Some advertising has been misleading, especially regarding third party coverage.
5. Some third party payors do give unfair advantage in reimbursement policies to free-standing clinics.
6. May force closure of some hospital emergency rooms.

7. With less than 24 hour coverage, patients may have no physician to call during hours facility is closed.
8. Hospital-owned clinics may cover initial losses by increasing inpatient charges.
9. "Profit motive" may overshadow "quality care motive."
10. Clinic availability may discourage patients without a primary physician from obtaining one.
11. Duplication of lab work in patients needing admission.
12. Most require up front payment and do not accept Medicare/Medicaid payments.
13. Force an increase in hospital emergency room charges due to fewer patients among whom to spread fixed costs.

The bottom line is far from written in the area of free-standing clinics. Not all clinics have succeeded, and in fact, many have already closed. It remains uncertain as to what share of the "market" they can grasp and likewise uncertain as to who will be hurt most—the primary physician or hospitals.

The Committee also discussed the various ways in which U.S. corporations are currently involved and hope to be involved in the delivery of health care in this country, especially as pertaining to the trends of the most recent several years.

The primary and possibly the only reason for such extensive corporate interest in medical care delivery is the rise in health care costs over the past several years. In 1982, the total health care bill of the United States was $321 billion, representing 10.5% of the gross national product. This contrasted with approximately 4.5% of the gross national product 10 to 15 years ago. Corporate health costs were just over $100 billion in 1982, representing approximately $1,000 per employee, and representing 35-40% of the total U.S. health care expenditure. For example, last year General Motors spent $1.7 billion, Ford Motor Company $760 million, and AT&T $1 billion on employee health benefits.

Corporations are eager to lower these health care costs, but the degree of concern does vary greatly from corporation to corporation. Nationwide, the total employee benefit package averages 30 to 40% of the total compensation of the employee. Health care costs represent only a small segment of these benefits, which include such things as vacation, life insurance, and retirement plans. Life and health insurance averages 5 to 6% of the total compensation package, with vacation and retirement plans making up the other 34 to 35% of the total benefit package.

A recent study conducted by MIT with a Robert Wood Johnson Foundation grant surveyed 69 major companies representing 6 million employees, or a total of greater than 12 million insured persons. They found that employees value their health care benefits most highly of all benefits and are, therefore, most reluctant to consider reductions in the health care benefit package or to consider co-pay arrangements. Although seemingly unmotivated to become involved in these issues in the past, there is a definite trend toward business participation in efforts to establish control of costs, as evidenced by many business coalitions nationally and at least two medicine-business coalitions in Kentucky.

Many solutions are being considered by corporations in an effort to reduce rising health care costs. As of April 1982 a total of 261 health maintenance organizations were operational across the nation, serving just over 11 million people and located primarily in cities with greater than 200,000 population. Of the total, approximately one-third are individual practice associations (IPAs); approximately 10% are Blue Cross and Blue Shield sponsored plans; and the remainder are either independent or owned and operated by national firms. The Kaiser plan remains the major HMO, representing some 75% of the nationally owned plans. Companies reluctant to encourage HMO's enrollment cite the perception of a lower quality of health care, lack of out-of-area coverage, financial instability, government involvement, and lack of freedom of choice of physicians as problem areas.

Generally, IPAs seem to be able to compete favorably with HMOs despite less evidence of cost reduction. Companies see advantages in the preferred provider organization (PPO) concept, but point out that simply discounting fees, which many but not all PPOs do, will be inadequate to reduce cost since this can be readily overcome by providing more care and more tests. Corporations appropriately focus on utilization review as being important in the overall health care cost problem. Corporations are becoming more interested in the specific portions of health care costs and not just in the total bill. Several business/medicine coalitions are attempting to collect data regarding physician fees, laboratory fees, and hospital costs, usually with the idea of publishing it for public use.

The R. J. Reynolds Company formed its own HMO in 1976, and the John Deere Company also has its own

HMO. These examples represent direct participation by corporations in the delivery of health care. According to *American Medical News* reports, these companies and their employees are happy with these arrangements and claim considerable savings. Reported savings include reports of reduction in total hospital days by as much as 50%. The Gillette Company has hired part-time physicians to provide primary care to employees rather than encourage the use of primary care physicians in the community. Most companies do have medical departments, but some are apparently attempting to establish comprehensive medical care departments rather than have physicians available only for treating minor ailments and injuries.

Companies are making attempts at employee education regarding appropriate use of health care. There is little data available on the effectiveness of these programs. They center on lifestyle modification such as proper exercise; nutrition; stress management; detection and treatment of hypertension; and reduction in tobacco, alcohol, and drug use.

There is growing trend for hospitals to look into the feasibility of "owning" medical practices in an effort to increase bed utilization. However, physician and staff opposition have hindered the aggressive pursuit of this concept. One of the original hospital owned medical practices is in Springfield, Massachusetts at the 311 bed Mercy Hospital. A need for primary care physicians in the community resulted in the establishment of a seven person hospital practice which represents 15 to 20% of the hospital's total admissions. A similar situation is in Albuquerque, New Mexico where there are six satellite practices (primary care centers) with 112 salaried physicians. Hospitals have not yet determined a way to become more directly involved in managing the medical staff in a way that is acceptable to their regular private physician staff. Most hospitals apparently favor hospital ownership of office buildings, offering low rent or no rent to their physicians as the best approach to maintain bed utilization.

The Humana Corporation has recently developed plans for a health insurance program, initially for its own employees, but ultimately to be offered to the public. In 1982 health insurance increased in cost 35% for Humana employees. Humana leadership noted that Healthcare of Louisville had less than $50.00 increase in employee cost for 1982, and this led to a large number of Humana employees joining Healthcare of Louisville and, in fact, receiving their hospital care in non-Humana hospitals.

The plan will be open not only to Humana employees, but to the public, especially to larger industries where Humana would offer to accept the companies current expenditures for health care and add a fixed amount each year (cost of living increase). Humana would then assume the risk of rising costs, with this being offset by their not having empty beds and unused facilities.

Corporate involvement in health care delivery has sharply increased, and this increase would appear to be entirely related to rising health care costs. This could certainly be said for the other changing trends in medical care in many instances. The overall climate appears to have changed from a quiet resignation to aggressive shopping for lower cost-efficient quality health care by corporations.

The plan which Humana hopes to implement by September 1, 1983, is in effect a PPO but will probably require HMO designation rather than an insurance service designation. This is because patients will be required to use Humana hospitals for their hospitalization or otherwise encounter a co-payment. The plan would offer freedom of choice of physicians, but obviously physicians on Humana hospital medical staffs will be the most sought after since patients will have a co-payment if hospitalized in a non-Humana hospital. They will have utilization review, but the formula has not yet been determined. Initially, at least, there will be minimal or no control on rate and the utilization by physicians, but one must wonder where this may lead over the next several years with physicians becoming more dependent on Humana hospitals. Humana hopes all physicians on the hospital staff will participate rather than Humana selecting physicians through contractural agreements.

The Committee also heard an indepth report on preferred provider organizations (PPOs) which is one of the faster evolving concepts in health care delivery.

A good working definition of a PPO in its most basic form is a group of health care providers (professional and/or institutional) who agree to provide services to a specific pool of patients (usually employment-based groups) at an agreed upon fee-for-service discount rate. The patient retains free choice of providers but is given an economic incentive (often first-dollar coverage) to utilize member providers. The system has built-in incentives for the provider (a pool of patients, fee-for-service, rapid claims turnaround) and payor (negotiated discounts) as well.

Because there are so many variations of the PPO concept, it is almost impossible to develop a precise definition that would encompass all such organizations. In addition, since the concept is evolving so rapidly it is, therefore, flexible and changes slightly almost daily.

Organizational forces for the establishment of PPOs usually originate from one of three areas: hospitals, physician groups, or insurance companies. It was reported that Mutual of Omaha will, on request, help organizations establish PPOs.

There are various reasons for setting up PPOs, most of which come back to the cost issue. PPOs will help protect a patient base in a competitive environment. Today's mobile society results in many people finding it difficult to locate physicians who accept new patients. There is an increasing inability on the part of professional organizations to discipline member and nonmember physicians which is a result of court rulings and Federal Trade Commission threats which have had a negative effect on quality review mechanisms.

The security of having some ability to predict health costs is attractive to many businesses, while physicians and hospitals may feel secure in having a specific patient population. Economic incentives can be built in for all parties concerned; however, most are directed to the employer for ease of marketing. PPOs are easy to establish and have low start up costs because people operate out of existing facilities and are often reimbursed through existing mechanisms.

A report on the Physician's Alliance for Medical Excellence, a preferred provider organization in Lexington, Kentucky, was given to the Committee.

Several physicians in the area had expressed a growing concern with the proscriptions of peer review in the area, and that was the impetus for establishing the Alliance. Physician members of the Alliance were carefully screened and made a contractual commitment to abide by the organization's bylaws and to obtain a certain amount of continuing medical education. Each member has agreed to voluntary fee review and arbitration. In addition, members must agree to certain regulations. One example was if the group agreed to freeze fees for a period of time, each member would have to do so or leave the organization.

The Alliance is set up on a fee-for-service basis and is not a capitation program. The reported advantage of the Alliance is that physicians control the program. If the fees of any member get outside the profiles established, the member can be dismissed. The Alliance is a newly formed group, and its impact in the community has not yet been assessed.

Our other area of study this year was to examine the goals and plans of future practitioners—the residents and medical students. A poll was taken of residents and third and fourth year medical students at both Kentucky medical schools. We received a 37% response from UK residents, a 43% response from fourth year UK students, and a 55% response from third year UK students. From UL, we had a 22% response from residents; a 50% response from fourth year students and 27% response from third year students.

The survey showed that many residents ready to enter practice have not fully decided on a practice location. Although 95% of the respondents indicated a preference for private practice, none indicated plans to enter a solo practice. All respondents indicated a preference for a group or partnership arrangement.

Nationally, females comprise 32% of medical school classes. Our survey indicated that females have a tendency to choose primary care specialties such as family practice, pediatrics, and psychiatry, which is consistent with national norms. Only four of the 99 females responding to the survey indicated a desire to work part-time after entering practice.

Of the total residents responding, 162 indicated a desire to enter primary care while 81 will enter non-primary care specialties. Fourth year students mirrored that finding with 86 of the respondents planning primary care careers and 41 indicating a preference for non-primary care practice.

An area of concern noted by the Committee is the lack of membership in KMA by the 31-to-40 year old age group. Forty-eight percent of the physicians in Kentucky in that age group are non-KMA members. These are physicians in residencies or just beginning practice who presumably would most likely face the competitive medical market yet are the least prepared to deal with it. For that reason, they are prime candidates for offers of salaried positions with non-physician owned corporations, free from the worries of the business side of practice, but which may gradually make them dependent on the corporation for which they work. As the corporation assumes more control over an individual's livelihood, physician independence will likely erode; and quality of care may become secondary to corporate profit.

While the Committee has no specific recommendations, we can summarize some of the more pertinent aspects of our discussions this year.

Cost is the single biggest challenge confronting physicians today and is the single most important reason for the rapid movement toward non-physician involvement in medical payment issues.

The profession has lost much of its ability to discipline its own peers; and unless some measure of authority is restored, professional organizations, and therefore the profession itself, will become increasingly fragmented and weak.

The corporate practice of medicine is here and will probably get stronger as larger numbers of physicians come into practice only to find very limited opportunities. As an example, from 1976 to 1981, the U.S. population increased 5.4% while the physician population increased 18.5%. Kentucky alone licenses 500 to 600 new doctors each year. Obviously, all do not stay in Kentucky, but the number is still significant.

Patients and employers are cost conscious today, and there is a growing trend to make individuals even more aware of the costs of medical services.

One thing seems clear. The profession needs to stand together today more than ever. County medical societies, KMA, and the AMA will remain effective as long as we have a unity of purpose and represent a significant percentage of physicians in Kentucky. That collective influence is our only hope of maintaining the privilege of independence we've enjoyed as a profession.

I am grateful for the time and effort the Committee members have given this year; and I particularly appreciate the efforts of Doctor Joan E. Rider, Doctor Allen E. Grimes, Jr., Doctor Robert R. Goodin, and Douglas E. Hough, Ph.D., of the AMA, for the excellent reports they developed and presented to the Committee.

Charles C. Smith, Jr., M.D., Chairman

Recommendations, Reference Committee No. 4:

Reference Committee No. 4 reviewed the Report of the Committee to Investigate Changing Trends in Medicine, and wishes to commend Doctor Charles Smith and his Committee on a concise and complete look at the current trends in medicine. Reference Committee No. 4 recommends that Report No. 30 be filed, and urges that the report be highlighted in the KMA *Journal* for distribution to the physicians in the State. [Editorial Note: See November, 1983, *Journal of the Kentucky Medical Association.*]

Resolution H

Jefferson County Medical Society

Blue Cross and Blue Shield Preadmission Review

WHEREAS, the Kentucky Medical Association is on record in opposition to medical peer review programs by nonphysician organizations, and

WHEREAS, a medical preadmission peer review program has been implemented by Kentucky Blue Cross and Blue Shield, and

WHEREAS, the Kentucky physician community has been afforded virtually no input into the design or development of this preadmission program, and

WHEREAS, this preadmission program appears to be a duplication of existing physician peer review, and

WHEREAS, Kentucky Blue Cross and Blue Shield is not a physician sponsored organization and does not represent the Kentucky physician community, and

WHEREAS, this preadmission program may promote chaos among Kentucky physicians and hospitals and, thus, be potentially damaging to quality patient care, now therefore be it

RESOLVED, that the Kentucky Medical Association is opposed to the implementation of preadmission review by Kentucky Blue Cross and Blue Shield, and be it further

RESOLVED, that the Kentucky Medical Association recommend to its membership and all Kentucky physicians that they individually consider this opposition in their relationship with Kentucky Blue Cross and Blue Shield.

Resolution U

Fayette County Medical Society

Blue Cross and Blue Shield Preauthorization Program

WHEREAS, it has been the position of the Kentucky Medical Association that medical review is a physician responsibility and obligation, and

WHEREAS, Kentucky Blue Cross, Blue Shield and Delta Dental has begun a program of preadmission medical review, and

WHEREAS, the Kentucky medical community was neither consulted nor notified that such review was being implemented prior to implementation, and

WHEREAS, the Kentucky medical community has not been provided with an opportunity to review and/or comment on medical criteria or policies of this medical review program, and

WHEREAS, Kentucky patients, physicians or hospitals appear to have no opportunity to appeal determinations made in this medical review program, and

WHEREAS, Kentucky Blue Cross, Blue Shield and Delta Dental is not a Kentucky physician program, and

WHEREAS, this medical review program appears to be a precise duplication of existing preadmission review, and

WHEREAS, the duplication in the medical review program will cause considerable confusion to patients, physicians and hospitals in Kentucky, now therefore be it

RESOLVED, that the Kentucky Medical Association go on record as being opposed to implementation of medical preadmission review by Kentucky Blue Cross, Blue Shield and Delta Dental, and be it further

RESOLVED, that the Kentucky Medical Association inform all members of this opposition, and be it further

RESOLVED, that the Kentucky Medical Association urge each member to individually consider his or her participation in such a review program until and unless such review is conducted through a recognized physician organization in Kentucky.

Resolution W
Board of Trustees
Third-Party Peer Review

WHEREAS, the Kentucky Medical Association is on record in opposition to medical peer review conducted by nonphysicians, and

WHEREAS, a medical preadmission peer review program has been implemented by Kentucky Blue Cross and Blue Shield, and

WHEREAS, Kentucky Blue Cross and Blue Shield is not a physician sponsored organization and does not represent the Kentucky physician community, and

WHEREAS, the duplication in the medical review program will cause considerable confusion to patients, physicians, and hospitals in Kentucky, now therefore be it

RESOLVED, that the Kentucky Medical Association go on record as being opposed to implementation of medical preadmission review by third-party carriers, and be it further

RESOLVED, that the Kentucky Medical Association inform all members of this opposition, and be it further

RESOLVED, that the Kentucky Medical Association adopts the policy that all review of physician activities be performed only by peers through a physician operated and controlled organization.

Recommendations, Reference Committee No. 4:

Reference Committee No. 4 heard combined testimony on Resolution H, Blue Cross and Blue Shield Preadmission Review, submitted by Jefferson County Medical Society; Resolution U, Blue Cross and Blue Shield Preauthorization Program, submitted by Fayette County Medical Society, and Resolution W, Third-Party Peer Review, submitted by the Board of Trustees.

The Committee heard a great deal of testimony in opposition to the preadmission program, and information was provided by representatives of Blue Cross and Blue Shield. Based on these discussions, the Committee recommends that the final "Resolved" portion of Resolution W be deleted, and that Resolution W be adopted, as amended, in lieu of Resolution H and Resolution U.

(Resolution W as amended was adopted, in lieu of Resolutions H and U, and is printed below in its final form:

Resolution W (As Amended)
Board of Trustees
Third-Party Peer Review

WHEREAS, the Kentucky Medical Association is on record in opposition to medical peer review conducted by nonphysicians, and

WHEREAS, a medical preadmission peer review program has been implemented by Kentucky Blue Cross and Blue Shield, and

WHEREAS, Kentucky Blue Cross and Blue Shield is not a physician sponsored organization and does not represent the Kentucky physician community, and

WHEREAS, the duplication in the medical review program will cause considerable confusion to patients, physicians, and hospitals in Kentucky, now therefore be it

RESOLVED, that the Kentucky Medical Association go on record as being opposed to implementation of medical preadmission review by third-party carriers, and be it further

RESOLVED, that the Kentucky Medical Association inform all members of this opposition.

Resolution I
Jefferson County Medical Society
Automatic Direct Payment of Major Medical Benefits

WHEREAS, major medical coverage is offered to subscribers as a means of paying for physicians' professional fees and hospital charges related to major medical expenses in excess of standard Blue Cross and Blue Shield coverage, and

WHEREAS, a significant number of patients who have incurred major medical expenses covered by Blue Cross and Blue Shield contracts are not aware of their coverage or otherwise fail to file a claim for major medical benefits, thus incurring added financial hardship, and

WHEREAS, certain other patients collect major medical payment from the carrier but fail to forward reimbursement to the providers involved, creating an uncollectible debt for services rendered, and

WHEREAS, assignment or automatic direct payment (piggybacking) of major medical benefits to providers would solve these problems, and

WHEREAS, Blue Cross and Blue Shield is beginning to take deliberate steps to allow direct payment of major medical benefits in limited circumstances, and

WHEREAS, changes in the wording of certain major medical certificates are needed, with permission of the State Insurance Commissioner, to make assignment of major medical benefits more widely available, now therefore be it

RESOLVED, that the Kentucky Medical Association urge Blue Cross and Blue Shield of Kentucky to encourage group master contracts which allow automatic direct payment (piggybacking) of major medical benefits to providers, and be it further

RESOLVED, that the Kentucky Medical Association support Blue Cross and Blue Shield if and when it should approach the State Insurance Commissioner to allow needed changes in major medical certificates in order to make assignment of major medical benefits more widely available.

Recommendations, Reference Committee No. 4:

Reference Committee No. 4 next considered Resolution I, Automatic Direct Payment of Major Medical Benefits, submitted by Jefferson County Medical Society, and recommends the following change. In the second line of the last "Resolved" the words "and when" should be deleted. The "Resolved" will then read:

"RESOLVED, that the Kentucky Medical Association support Blue Cross and Blue Shield if it should approach the State Insurance Commissioner to allow needed changes in major medical certificates in order to make assignment of major medical benefits more widely available."

Reference Committee No. 4 recommends adoption of Resolution I, as amended.

Resolution J
Board of Trustees
Report D, AMA Council on Medical Services

WHEREAS, the AMA House of Delegates has adopted Report D of the Council on Medical Services, which recommended that the AMA "seriously consider recommending that third parties change to an indemnity system of payment for physicians' services," and

WHEREAS, the AMA House of Delegates has circulated Report D of the Council on Medical Services to component state medical associations asking that the report be considered carefully by their constituents, and

WHEREAS, this issue will be discussed again at the Interim Meeting of the AMA House of Delegates in December, 1983, and

WHEREAS, the recommendations contained in Report D of the Council on Medical Services encompass a substantial change in current KMA policy which is "that fees for physicians be based solely on usual, reasonable, and customary fees for services rendered," and

WHEREAS, the Kentucky delegation to AMA feels it desirable to obtain guidance from the KMA House on this issue, now therefore be it

RESOLVED, that Report D of the AMA Council on Medical Service (A-83) be distributed to the KMA House of Delegates for comment at the 1983 Annual Meeting.

Resolution P
Campbell-Kenton County Medical Society
UCR vs. Indemnity Reimbursement

WHEREAS, the concept of Usual, Customary and Reasonable reimbursement for physicians' services has been distorted in many health insurance policies by both the government and private carriers, and

WHEREAS, the President of the United States has requested a freeze on Medicare reimbursement to physicians for at least a year, and

WHEREAS, indemnity reimbursement, by its very nature, divorces the health insurance carrier from making any determination about the given physician's fees for service, and

WHEREAS, there remains a fiduciary contract between a patient and his physician that no insurance policy should negate, and

WHEREAS, at AMA's 1983 Annual Meeting, the House of Delegates approved the recommendations of the Council on Medical Service Report D and requested opinions of all AMA members and constituent socieities on that report, now therefore be it

RESOLVED, that the KMA House of Delegates concurs with the essence of the Council on Medical Service Report D of the AMA 1983 Annual Meeting of the House of Delegates, and be it further

RESOLVED, that the KMA House of Delegates strongly urge KMA Delegates to the AMA to express our endorsement of the viewpoint that indemnity payment is the preferred method of payment for physician services, and be it further

RESOLVED, that our AMA Delegation is encouraged to remind the AMA House of Delegates that Kentucky physicians continue to believe that a physician's prerogative to determine and a patient's prerogative to accept or reject, and be it further

RESOLVED, that implicit in our endorsement of indemnity payment is the rejection of any plan of payment which would require acceptance of indemnity payments as payment in full for physicians' services.

Recommendations, Reference Committee No. 4:

The Committee heard combined testimony on Resolution J, Report D, AMA Council on Medical Service, submitted by the Board of Trustees, and Resolution P, UCR vs. Indemnity Reimbursement, submitted by Campbell-Kenton County Medical Society.

The Committee recommends adoption of Resolution J, and notes that its intent has already been accomplished.

The Committee heard testimony from the AMA Delegates indicating that there have been recent changes in AMA House perception of AMA Report D, and Reference Committee No. 4 recommends that Resolution P be referred to the Board of Trustees for further consideration.

Resolution M
Board of Trustees
Medicare/Medicaid Hospital Preauthorization Programs

BE IT RESOLVED, that KMA strongly opposes hospital admission preauthorization programs through Medicare and Medicaid because they will be disruptive to the physician/patient relationship, jeopardize quality of care, and will likely result in cost shifting, rather than overall long-term cost savings, and be it further

RESOLVED, that KMA should petition Kentucky's U.S. Congressional delegation to scrutinize and challenge the line of authority to conduct preauthorization and to seek objective information on the cost effectiveness and effect on quality of care of preauthorization programs, and be it further

RESOLVED, that the Board of Trustees be directed to seek all reasonable avenues of legal resolution and to formulate alternatives to preadmission review, and be it further

RESOLVED, that KMA urge its members to recognize and appreciate the predicament of recipients of Federal medical programs who are at the ultimate disadvantage, and maintain the caring, time honored relationship of the medical profession in the best manner each individual member can accomplish.

Resolution R
Calloway County Medical Society
Medicare/Medicaid Hospital Preadmission Authorization

WHEREAS, for over 40 years the medical profession has resisted the intrusion of third parties into the time honored doctor/patient relationship, and

WHEREAS, during this time the incremental intrusion of third parties has become a fact in almost all areas of medical care, and the cost of medical care has escalated to almost undreamed of heights, and

WHEREAS, the recent decision by KPRO to require preadmission authorizations represents the most flagrant and demeaning intervention the physician and patient have experienced to date, now therefore be it

RESOLVED, that KMA resist, by whatever means necessary, the continuation of the preauthorization policy in Kentucky, and be it further

RESOLVED, that the KMA look closely into the functions of KPRO as to its efficiency and whether cost savings are actually accomplished and determine if we should continue to support its functions.

Recommendations, Reference Committee No. 4:

Reference Committee No. 4 heard combined discussion on Resolution M, Medicare/Medicaid Hospital Preauthorization Program, submitted by the Board of Trustees; and Resolution R, Medicare/Medicaid Hospital Preadmission Authorization, submitted by Calloway County Medical Society.

A great deal of discussion was heard on these Resolutions, and input was received from KPRO representatives. Based on this discussion, the Committee felt that the first "Resolved" of Resolution R was addressed appropriately by Resolution M, and did not feel the remaining "Resolveds" of Resolution R should be adopted.

Reference Committee No. 4 therefore recommends that Resolution M be adopted in lieu of Resolution R.

Resolution Q

Campbell-Kenton County Medical Society

Medicare/Medicaid Preauthorization Certification Programs

WHEREAS, cost effectiveness in holding down health care costs is the stated reason for instituting preauthorization certification programs, now therefore be it

RESOLVED, that KMA seek a true picture of whether Medicare/Medicaid preauthorization programs are cost effective by attempting to accomplish the following:

1. Try to acquire an ongoing record of those patients who were denied preauthorization certification;
2. Along with these records, try to determine the reasons for requests for admission;
3. Try to monitor whether these patients are later admitted to the hospital (future preauthorization or emergency admission) for reasons related to those given on the initial preauthorization requests;
4. Subtract the cost of such subsequent hospitalizations from the reported savings to the programs to yield an accurate net savings figure.

Recommendations, Reference Committee No. 4:

Reference Committee No. 4 then discussed Resolution Q. Based on testimony heard, the Committee felt the first "Resolved" of the Resolution should be amended by deleting the word "attempting" in the third line, and in its place, inserting the phrase "requesting that KPRO attempt." The "Resolved" will then read:

"RESOLVED, that KMA seek a true picture of whether Medicare/Medicaid preauthorization programs are cost effective by requesting that KPRO attempt to accomplish the following:"

Reference Committee No. 4 recommends that Resolution Q be adopted, as amended.

Mr. Speaker, I recommend the adoption of the Report of Reference Committee No. 4 as a whole.

Mr. Speaker, I want to express my appreciation to the members of the Reference Committee and to those who expressed their opinions during the Reference Committee hearing. The Reference Committee members are: Gordon W. Air, M.D., Crestview Hills; James Childers, M.D., Louisville; C. R. Dodds, M.D., Madisonville; and John E. Downing, M.D., Bowling Green. I would also like to thank Miss Sharon Heckel for her assistance in the preparation of this report.

Reference Committee No. 4:
John D. Perrine, M.D., Lexington, Chairman
Gordon W. Air, M.D., Crestview Hills
James Childers, M.D., Louisville
C. R. Dodds, M.D., Madisonville
John E. Downing, M.D., Bowling Green

• Editorial Note: Unless otherwise indicated, the Reference Committee action on each report and Resolution was accepted as printed here. Any opposing action taken is stated in discussion following the item.

REPORT OF REFERENCE COMMITTEE NO. 5

Raymond J. Timmerman, M.D., Ft. Thomas
Chairman

Reference Committee No. 5 considered the following Reports and Resolutions:

31. **Report of the Committee on Maternal and Child Health**
32. **Report of the Committee on Medicare and Other Governmental Medical Programs**
33. **Report of the Committee on Health Planning**
34. **Report of the Technical Advisory Committee on Physician Services (Title XIX)**
35. **Report of the Committee on Community and Rural Health**

36. Report of the Committee on School Health, Physical Education and Medical Aspects of Sports

37. Report of the Advisory Committee to CHR

Resolution L — Kentucky Medical Assistance Program
(Board of Trustees)

Resolution N — Withdrawal of Support for the Medicaid Program
(C. Milton Young, III, M.D.)

Substitute

Resolution S — Medical Care Access for the Poor
(Fayette County Medical Society)

Resolution V — Health Hazards to Kentucky's High School Athletes
(Board of Trustees)

Resolution AA — Kentucky Medical Assistance Program
(Pulaski County Medical Society)

ITEMS FOR CONSENT

Reference Committee No. 5 reviewed the following items and recommends they be adopted or filed as indicated, by the consent of the House, without discussion:

31. Report of the Committee on Maternal and Child Health — Filed
32. Report of the Committee on Medicare and Other Governmental Medical Programs — Filed
35. Report of the Committee on Community and Rural Health — Filed
36. Report of the Committee on School Health, Physical Education and Medical Aspects of Sports with Recommendation — Adopted

Report of the Committee on Maternal and Child Health

While KMA's Maternal and Child Health Committee did not meet formally, it did maintain a close awareness of developments on both a state and national level. Several of the matters which came to the attention of the Committee were of a nature such that it was imperative that responses be prepared as expeditiously as possible. Therefore, telephone contacts with various Committee members were maintained, and guidance and direction were provided in this fashion.

One of the issues of interest at the national level was the legislation commonly referred to as either the "Squeal" or "Snitch" law, which mandated that a parent or guardian be notified within 10 days when any contraceptive drug or device is provided to a minor. Recently the Courts determined that HHS had exceeded its authority in establishing such a requirement.

Of similar import were those regulations arising from the "Baby Doe" case. The Committee noted its concern about such regulations and followed closely the litigation initiated by the American Academy of Pediatrics and the National Association of Children's Hospitals. The suit resulted in the initial regulations being struck down. The Court noted that the proposal appeared intended "to change the course of medical decision-making in these cases by eliminating the parents' right to refuse to consent to life sustaining treatment of their defective newborn."

In mid-July the Department for Health and Human Services promulgated another regulation, the import of which was essentially the same as that of the previous proposal. There was some modification of the requirement for posting notice, but this was not perceived by the American Academy, the AMA or other litigants as having eliminated the problems which existed previously. Therefore, another suit has been initiated seeking the withdrawal of this latest proposal.

On a State level it appears the controversy over lay midwives will again surface during the 1984 Legislative Session. As you will recall, a measure calling for additional licensing of lay midwives passed the Senate in 1982, and was narrowly defeated in committee in the House. Proponents of the bill have been lobbying for it during the Interim, and it must be pointed out again that regardless of what response physicians determine is appropriate to such a proposal, it must be voiced in light of the fact that we are not dealing here with a purely medical or legal issue, but rather one which is intertwined with a particular social outlook or value system.

The development of regulations dealing with alternative birth centers continued during the past year, and challenges were made to certain regulatory proposals calling for reimbursement of nurse midwives working within these centers. A proposal was also eliminated from the State Health Plan which would have exempted these centers from the requirements of Certificate of Need.

Several members of the Association, as well as KMA staff, attended various hearings of Interim Legislative

Committees which addressed the subject of crippled children's services. Changes in the mechanism for delivering such services prompted objections by several physicians involved in this area of care, and this matter has, in turn, been referred to the KMA Committee on State Legislative Activities for additional study.

KMA staff also continued to monitor developments in the area of State reimbursement for uncollectible bills resulting from treatment provided in neonatal units throughout the State. The level of reimbursement of these uncollectibles had decreased below the 50% mark at one time, but at the time of this writing, has returned to a more tolerable level.

As Chairman of the Committee, I express my appreciation to the members for their service and their contribution to the Association and to medicine in general. I would also like to thank the KMA staff for its assistance to our Committee.

Van R. Jenkins, M.D., Chairman

Report of the Committee on Medicare and Other Governmental Medical Programs

The Committee on Medicare and Other Governmental Medical Programs held a meeting with representatives of the new Medicare Part B Office, operated by Blue Shield. This meeting was at the direction of the House of Delegates, which asked that new carrier operations be monitored.

Blue Shield began carrier operations for Part B in October, 1982. It remained at the site of the old carrier in Lexington, and retained as many of the existing staff members as possible.

Upon assuming carrier responsibilities, Blue Shield had a considerable backlog of claims on hand, but by January, had established a turn-around time of 10 days. A turn-around time of seven days was being pursued.

A major concern of the medical community with Part B continues to be the level of reimbursement, according to the Part B representative, although approximately 52% of all providers in the state accept assignment. Approximately 26% of this number, however, includes physicians who must accept assignment for Medicaid cross-over patients.

To assist physicians, the Medicare representative urged that they use the HCFA 1500 claim form and file claims as frequently as possible. A claims clerk can usually process a minimum of 300 claims per day, and the average claims processing time for each form is 2.5 minutes. The more batched bills that are submitted, the easier the processing operation is, and the faster claims can be processed.

Possible internal program changes in the Part B system include more rapid processing if Blue Cross and Blue Shield is involved as the primary or secondary carrier, so that only one claim will need to be filed, which will be automatically processed and sent to other carriers involved. Another planned process is the development of a conversion table between Blue Shield codes, the New York Relative Value codes and other standard codings. All of these would be accepted and conversion would take place within the computerized system. It is Blue Shield's plan to try to convert to a universal coding system in late 1984, based on CPT4.

At the time of the meeting, a number of proposals were being made at the national level to modify the Part B program, which would include potential reimbursement on the basis of diagnosis related groups. It was not anticipated that any such activity would occur before 1985, although it was quite likely that such a system would go into effect.

The Committee has been pleased to function in the Association's behalf as a liaison with the Medicare Program, and urges any questions or requests that the membership may wish to pose.

Paul J. Parks, M.D., Chairman

Report of the Committee on Community and Rural Health

Due to scheduling conflicts, the Committee on Community and Rural Health was unable to meet during the 1982-1983 Association year. However, the majority of issues the Committee normally would consider, centered around the Integrated State Health Plan implemented by State Government. During the period the Plan was being reviewed and adopted, proposals were enumerated in various reports along with considerable mailings to members. Due to the severity of the proposals and time limitations, the Board of Trustees, very ably and correctly, dealt with the problems in a direct fashion. Members of the Association were well represented, and we compliment the Board for its stand in seeking to protect the citizens of the Commonwealth. Should the Plan now in place be continued through the

next administration, quality of health care and accessibility, especially in rural areas, will be severely restricted.

The Commonwealth of Kentucky, in cooperation with physicians, hospitals and nursing homes, has made tremendous strides over the past years in bringing Kentucky to parity with other states in health care. Despite the fact that most Kentuckians now receive high quality and accessible health care, there are those elements in bureaucracy who, through health planning mechanisms, would reverse the progress made over the past 30 years. Ironically, in terms of physician charges and inpatient costs, Kentucky ranks near the bottom. This should serve as a point of pride for our government and citizens.

During the upcoming 1984 Kentucky General Assembly, several health issues of concern to the Committee on Community and Rural Health will be considered. The Committee will be reviewing those issues and presenting recommendations to the Board of Trustees and the Committee on State Legislative Activities.

On behalf of the members of the Committee, we appreciate the opportunity to serve our fellow physicians and look forward to a productive year.

Don R. Stephens, M.D., Chairman

Report of the Committee on School Health, Physical Education and Medical Aspects of Sports

The School Health Committee continues its annual sponsorship of the Medical Aspects of Sports Symposium with the University of Kentucky College of Medicine in Lexington. This popular program, which is now in its 11th year, continues to attract over 200 registrants each year. The Committee designates a Program Committee to develop the criteria for each year's symposium which consists of general lectures, demonstrations and hands-on participation. The CPR training of coaches has been one direct benefit that has already proven to be invaluable during the past year. The coaches, trainers and other school personnel directly involved with the state's athletes are better trained and better able to handle the minor medical emergencies that occur on the state's high school athletic fields. We find the interest among team physicians, coaches and officials remains high and we plan to continue to offer this program in the Spring of 1984. The program is self-sufficient and all expenses are paid either through contributions from pharmaceutical and equipment manufacturers or general registration. I would like to convey my appreciation to John Allen, M.D., Program Committee Chairman, who spent innumerable hours developing the program this year. I would also like to express appreciation to the University of Kentucky College of Medicine's Continuing Medical Education Department for their staffing and implementation of this effort.

The 1982 State Boys' Football Playoffs were covered from the district level on up. The Committee either directly offered services or sought assistance from other team physicians in the state to insure that every playoff game in the state had medical coverage. The project was very successful and the Committee hopes to use these efforts to encourage additional physicians to provide services to the schools that still do not have a team physician. Approximately 65% of the high schools in the state actively work with a team physician. However, with the increased activity of expanded sports programs in many schools, the burden on one individual physician to provide coverage is becoming increasingly difficult. The Committee strongly encourages physicians in their community to become actively involved with the state's youth not only providing assistance when an injury occurs but to assist local schools in developing conditioning programs that would alleviate, or at least reduce the number of injuries.

The Committee spends a significant amount of its time on sports medicine and addresses issues of school health as they become apparent. However, to take a more aggressive approach to analyzing the needs of the state's adolescent population, the Committee is sending a representative to participate in the National Committee on the Child which is sponsored by the AMA in Chicago in September. The information obtained from this conference will hopefully provide the guidelines to assist the Committee in redirecting its efforts in the area of school health.

The Committee is also reviewing the steps local equestrian groups and organizations undertake to prevent head injuries. We have been requested by North Carolina to undertake an educational effort to encourage all participants of equestrian sports to wear appropriate headgear. We are currently surveying the equestrian facilities within the state to determine the protocol and ascertain what procedures we should undertake to assist in encouraging this particular group to protect themselves.

The Committee continues its active participation in the KHSAA Pre-season Football Clinics for Coaches and Officials by providing a presentation on the conditioning and training of athletes. This year we are also including a short presentation on the evaluation and assessment of head injuries. A brief brochure is being made available to all officials and coaches in the state to assist them in evaluating head injuries and to give them the basic protocol to follow in determining when to allow the individual to return to competition. The publication is a layman's approach to adequately evaluate the situation while waiting for medical care and how to follow up on a situation like this after medical care has been provided.

The Committee has no way of being certain how productive these presentations or the programs provided at the annual symposium are, but we are aware, through numerous comments from coaches, officials and school administrators that our efforts are appreciated and that they should be continued. The School Health Committee members are actively involved in these efforts and I wish to convey my appreciation to each of them for their efforts.

R. Quin Bailey, M.D., Chairman

RECOMMENDATIONS:

1. The Committee recommends that KMA continue its annual sponsorship of the Medical Aspects of Sports Symposium with the University of Kentucky College of Medicine.

End of Consent Calendar Items

Report of the Committee on Health Planning

This Committee met three times in 1983 to consider the problems given to us. On March 18, 1983, we considered the changes brought about by the new State Health Planning Council as compared to the previous State Health Coordinating Council. The Committee approved of the changes, but thought more physicians should be on the Council—there being only one of 23 members. We also reviewed "Remarks to the Subcommittee on Health Care Financing and Cost Containment of the Interim Joint Committee on Health and Welfare" by George D. Kent, Ph.D. While our Committee agreed with many of the precepts set forth, we disagreed with much that was presented as being either false or twisted. As far as the Certificate of Need goes, we thought it had been ineffective since 1979 in keeping down costs. The new SHPC should bolster the Certificate of Need process since it now has the authority to determine whether or not a Certificate of Need application is consistent with the State Health Plan. The Committee recommended that KMA make known to all health planning bodies (local, regional or state) that it is interested in having input on all health related matters and that the health planning bodies include more qualified and interested doctors of medicine on their boards and councils.

On April 8, 1983, the Committee again met and wrestled with more review of the changes relating to the SHPC, its impact on KMA, and how KMA could impact on it. Next order of business was a review of the Contractual Agreement between the Cabinet for Human Resources and the Area Development Districts. We concluded that the CHR, through its contract, completely controlled the local Health Planning Councils of the ADDs. The final piece of business was a review of "A Report on Kentucky Physician Manpower." The report shows a large increase in the doctor population in Kentucky in the past 20 years and predicts an excess of doctors by 1990 of 900 to 2,000. While optimistic, the report states that certain areas will continue to be underserved. It also predicts that the more doctors, the higher the cost of health care. The Committee disagreed on a number of assumptions of the manpower study. Further study of this problem should be ongoing by KMA.

The final meeting of our Committee was May 6, 1983, with the purpose of assessing the "State Health Plan" and giving our views to the KMA Executive Committee for their presentations to the CHR. We first came to the conclusion that very little, if any, physician input was reflected in the Plan. The Plan presented would be for three years instead of an annual update. This is a positive point. However, much of the Plan is concerned with cost containment rather than planning for health needs. The Plan would reduce the number of physicians being produced by the University of Louisville or University of Kentucky, but at the same time, introduce allied health personnel (*ie*, nurse practitioners, physician assistants, *etc.*) to the underserved areas to act independently without physician supervision. Only two tertiary centers are recognized in the Plan, *ie*, Lexington and Louisville. We suggested the medical tertiary centers contiguous to the State's borders also be rec-

ognized (*ie*, Memphis, Nashville, Evansville, Cincinnati, and Huntington) and used for convenience, time and money saved. Another area of disagreement with the Plan was the exemption from Certificate of Need of certain services now covered under KRS Chapter 216 B. There were many more areas of the Plan with which we were in disagreement, and these concerns were transmitted to the Executive Committee. They are listed as follows, but not necessarily in order of importance:

- Expansion and use of nurse practitioners and physician assistants; allow independent billing and authorize nurse practitioners to prescribe nonscheduled drugs.
- Fixed fee schedule for any medical service whether provided by a physician or other allied practitioner.
- Replace the Rural Kentucky Medical Scholarship Fund with the Rural Allied Health Professionals Fund.
- Delicensure of non-operational and underutilized hospital beds.
- Regionalization of acute care hospitals by services.
- Minimum hospital occupancy rates with a delicensure penalty.
- Statewide capital construction limit of $166 million for hospitals.
- Consideration of a Hospital Rate Review Commission.
- Use quotas for ICU, CCI, cardiac catheterization, radiation therapy units.

I wish to thank the members of the Committee for their help along with Mr. Bill Doll and Mrs. Doris Crume, our secretary. Without their concerns and thoughts this would have been an impossible task.

Frederick A. Stine, M.D., Chairman

Recommendations, Reference Committee No. 5:

The Reference Committee reviewed the Report of the Committee on Health Planning. As addressed in the Report, the Reference Committee recommends that the Kentucky Medical Association should seek strong input to, and adequate representation on, all health planning bodies.

Reference Committee No. 5 recommends this report be filed and that the recommendation of the Reference Committee be adopted.

Report of the Technical Advisory Committee on Physicians Services (Title XIX)

The Technical Advisory Committee on Physician Services has noted with concern and protest some alarming changes that have occurred with regard to the Kentucky Medical Assistance Program.

In December, the Committee voiced apprehension to the Medical Assistance Advisory Council at the fact that physician profiles had not been upgraded and the fact that physician reimbursement for in-hospital services had been reduced. Similarly, no profile update was scheduled for the beginning of this fiscal year. The Committee pointed to ever-decreasing physician participation as the result of this dwindling reimbursement. As early as December, and as of this date, very little substantial information is available concerning many facets of the Citicare program implemented in Jefferson County.

Citicare is the capitation program for Medicaid recipients, where the physician is assigned a minimal number of patients and receives a minimum capitation payment per month, but must provide or arrange for all the patients' services from this base amount.

By March, a medical services agreement for physician participation in Citicare has been developed which contained some aspects of undue legal exposure for the physician. While these portions of the agreement have since been revised, many questions remain, including the details of contracts between Citicare and the fiscal agent, as well as details of financial arrangements between Citicare and the Cabinet for Human Resources.

Of primary concern this year was the announcement by Secretary Adams in late May of even further reductions in the physician reimbursement. The major cut affected in-hospital services, again, and reduced the level of payment to the first $20 of each line item of service, and 35% of the allowable Medicaid charge. The projected cost reduction this would provide was estimated to be $5.9 million, with a corollary reduction in payments to hospitals of $10.3 million. A part of the Secretary's announcement also declared the imposition of a preauthorization program for hospital admissions and a mandatory second opinion program for selected surgeries, effective September 1. This was projected to save $2 million in Medicaid costs.

In its report to the Council on these matters in March, the Committee noted that the problem of Medicaid expenditures was secondary to the actual viability of the

Medicaid Program itself. It was pointed out that these proposals would not merely reduce expenditures, but would, in fact, curtail the availability of care to Medicaid recipients. Relating the policy of the KMA House of Delegates that physicians would continue to recognize a historical commitment to render needed medical care, the effect on physician participation would be obvious.

At this point, the Committee also expressed questions about the function and role of the Medical Assistance Advisory Council. On May 5, a special called meeting of the Council was convened to consider the proposals later announced by the Secretary. The Council acted negatively on the majority of these, but without further conference, they were subsequently announced for enactment.

Later information that developed indicated that the latest cuts were to avoid spending beyond a Federally imposed cap. If excessive expenditures were incurred, a dollar penalty would be charged to the Kentucky Program by the Federal Government; yet other information indicated that if the penalty increased, so would Federal matching funds, so the dollar loss caused by the penalty would be mitigated.

With regard to the preauthorization program, it was learned that physicians wishing to hopitalize Medicaid patients would be required to call a toll free number; provide patient information, diagnosis and proposed treatment regimen; and if approved, would receive an authorization number. This same number would be provided simultaneously to the hospital. The second opinion program will likely be headquartered in Frankfort or Lexington with a panel of physicians providing second opinions expressly for the Program.

Some final concerns that developed were that the Citicare program which initially was to be restricted to physicians in Jefferson County, is now to be the billing location for providers of service in Hardin, Bullitt, Spencer, Shelby and Oldham Counties in Kentucky, and the Indiana Counties of Clark, Floyd and Harrison. Additionally, in spite of physician reimbursement cuts, new services are to be added to the Program. These are alternative intermediate care services to the mentally retarded and a new home and community based service project.

Some related developments affecting the Medicaid Program this year were the development of regulations that would provide direct reimbursement to nurse midwives at a rate of 75% of the amount reimbursed to general practitioners, and regulations for indirect reimbursement to nurse anesthetists. Emergency regulations published in July would allow the Medicaid Program to contract with "Health Insurance Organizations" and prepaid health plans directly for the contractual funding of Medicaid patient services. Obviously, these latter regulations have some application to the Citicare program, but the possibility of expanded application is uncertain at this time.

The Cabinet for Human Resources this year divested itself of the administration of the Medicaid Program and contracted with a claims administration corporation headquartered in Texas named Electronic Data Services. The reason for this change, according to CHR officials, was that claims could be processed more quickly, efficiently and cheaply than the State was capable of doing, although the State would retain all policy authority.

The Technical Advisory Committee observed the changes just cited with serious misgivings and strong protest. While many of these changes were not new—merely constituting a change in degree—some were dramatic, and all point to the fact that each year in recent history the number of allowable services furnished by the Program continues to grow, while reimbursement continues to diminish. The authority and position of the Medical Assistance Advisory Council, as well as the various technical advisory committees (TACs), have also diminished.

The Council and the TACs are statutorily required groups, and all of the individuals involved have participated diligently and voluntarily, all apparently to no avail. The interest and efforts of the physicians' TAC have always rested on a genuine concern with the overall status of the Medicaid Program, but have been continuously subjected to negative actions directed at physicians and the manner of their participation. It must now be stated that the present operation of the Program is simply not sufficient to its stated obligation of providing medical services to the indigent. The Committee has no recommendations or suggestions, but can only express frustration over the direction of the Program and, most importantly, grave concerns about the welfare of the Program's recipients.

Harold L. Bushey, M.D., Chairman

Recommendations, Reference Committee No. 5:

The Committee reviewed information provided by the Technical Advisory Committee on Physician Services (Title XIX). After much discussion it was felt that the

State Government does not seek out, inform or listen to medical input. Therefore, the Committee recommends that the Kentucky Medical Association seek a mechanism(s) whereby physicians have input in all decisions involving health care.

Reference Committee No. 5 recommends this report be filed and that the recommendation of the Reference Committee be adopted.

Report of the Advisory Committee to the CHR

The Advisory Committee to the Cabinet for Human Resources (CHR) consists of the President, President-Elect, Chairman of the Board of Trustees and Chairman of the Committee on State Legislative Activities. Its job is to meet with the Secretary and other Senior Cabinet officials to discuss policy issues of concern to both organizations.

This year, the Committee met with the Secretary twice. The first meeting was held soon after the Annual Meeting to discuss the issues adopted by the House of Delegates that involved CHR. These included the Citicare program; continued inequities in the Medicaid Program regarding medical services and reimbursement; medical services provided by health departments; and the activities of the Governor's Coalition of Payors to Address Health Care Costs.

The second meeting with the Secretary was held in June to protest expenditure reductions in the Medicaid Program that would affect reimbursement to physicians for in-hospital services.

The outcomes of all these issues are addressed in other reports appearing in this book or included in the Report of the Chairman of the Board of Trustees.

While meetings of this Committee with CHR officials are infrequent, the Committee's efforts have been beneficial with regard to time specific issues.

Richard F. Hench, M.D., Chairman

Recommendations, Reference Committee No. 5:

The Committee reviewed the Report of the Advisory Committee to CHR. Considerable discussion was heard on this report by the Commissioner of the Bureau for Health Services and others.

Reference Committee No. 5 recommends this report be filed.

Resolution L
Board of Trustees
Kentucky Medical Assistance Program

WHEREAS, the Kentucky Medical Assistance Program was developed as a full-service medical care program for the indigent of the Commonwealth, and

WHEREAS, each recent year the Cabinet for Human Resources has continued to implement additional nonprimary and nonmedical programs while regularly reducing the amount of resources for essential primary medical services, thereby reducing access to medical care by the indigient and effective participation by physicians, and

WHEREAS, this constant diminution will continue so long as primary services are not a Program priority, more nonprimary services are added, and existing services are expanded, and

WHEREAS, in spite of years of dedicated input by the Kentucky Medical Association to the Kentucky Medical Assistance Program through the Technical Advisory Committee on Physician Services, the Medical Assistance Advisory Council, numerous special meetings with Cabinet for Human Resources officials and legislative hearings, suggestions about Program shortcomings have been largely ignored, now therefore be it

RESOLVED, that KMA pursue all reasonable channels to promote adequate financing of the Medicaid Program for the provision of vital primary medical services, and be it further

RESOLVED, that KMA pursue all reasonable channels to preserve and promote full funding for primary medical services prior to expansion through new or nonmedical services, and be it further

RESOLVED, that KMA can no longer support the present operation of the Kentucky Medical Assistance Program, nor can it encourage its members to participate in a program which is clearly detrimental to the medical welfare of the indigent population of the Commonwealth, and be it further

RESOLVED, that KMA urge each member to consider his or her relationship with the Medicaid Program and determine the individual method of fulfilling the medical care obligation to the indigent.

Resolution N
C. Milton Young, III, M.D.
Withdrawal of Support for the Medicaid Program

WHEREAS, Citicare places the primary care physician in a conflict of interest situation that runs counter to the canons of Ethics promulgated by the American Medical Association [Current Opinions of the Judicial Council of the American Medical Association, 1982, Section 2.02, page 2], and

WHEREAS, the use of the capitation form of payment by Citicare causes a disruption of the physician/patient relationship, which is the very foundation upon which the practice of medicine is based; this determining of the profit derived by the physician on his ability to reduce the scope of services used by the patient, fosters suspicion of the motives of the physician, as to whether the decision is based on economic or medical grounds, and

WHEREAS, we believe that the Citicare program as presently constituted is operating to the detriment of physician and patient alike, and has been designed only to cut the cost of medical service to the poor, now therefore be it

RESOLVED, that the Kentucky Medical Association withdraw its support of the Kentucky Medical Assistance Program until such time as it ceases to fund the Citicare program as presently operated in Jefferson County, and be it further

RESOLVED, that the Kentucky Medical Association ask each member of the Associaton to reeaxmine his or her relationship with the Medicaid Program and to determine individually their method of fulfilling their obligation to render medical care to the medically indigent of the Commonwealth.

Resolution AA
Pulaski Comty Medical Society
Kentucky Medical Assistance Program

WHEREAS, the recent changes in the Kentucky Medical Assistance program have already proved detrimental to the care of the indigent patients, particularly in rural areas, and

WHEREAS, recent changes in the Medicaid Program would indicate conditions will worsen in the future, and

WHEREAS, reimbursement to physicians for hospital care is below overhead costs in many cases, now therefore be it

RESOLVED, that

1. The clearest solution to the Medicaid program is to return the Medicaid budget to the four federally-mandated first priority services;

2. That the KMA State Legislative Committee endeavor to make as one of its first priorities a determined effort to secure greater appropriations for the Medicaid Program at the next and future legislative sessions;

3. That the KMA and each of its constituent societies make every effort to educate the general public as to what the Medicaid Program covers and how much physicians have contributed to it in its 22 years of operation;

4. That members of the Pulaski County Medical Society await the decision of the KMA to decide what our future actions will be relative to the Medicaid Program.

Recommendations, Reference Committee No. 5:

Reference Committee No. 5 considered Resolution L, submitted by the Board of Trustees; Resolution N, submitted by C. Milton Young, III, M.D.; and Resolution AA, submitted by Pulaski County Medical Society. After considerable discussion, the Reference Committee recommends that an additional final "Whereas" and final "Resolved" be added to Resolution L, as follows:

"WHEREAS, we believe that many programs established by Medicaid, such as the Citicare program, as presently constituted are operating to the detriment of physician and patient alike, and have been designed only to cut the cost of medical service to the poor."

"RESOLVED, that the Kentucky Medical Association assist physicians in educating patients and citizens abont the problems of the Kentucky Medical Assistance Program."

Reference Committee No. 5 recommends the adoption of Resolution L, as amended, in lieu of Resolution N and Resolution AA.

(Resolution L as amended was adopted, and is printed below in its final form:)

Resoluton L (As Amended)
Board of Trustees
Kentucky Medical Assistance Program

WHEREAS, the Kentucky Medical Assistance Pro-

gram was developed as a full-service medical care program for the indigent of the Commonwealth, and

WHEREAS, each recent year the Cabinet for Human Resources has continued to implement additional nonprimary and nonmedical programs while regularly reducing the amount of resources for essential primary medical services, thereby reducing access to medical care by the indigent and effective participation by physicians, and

WHEREAS, this constant diminution will continue so long as primary services are not a Program priority, more nonprimary services are added, and existing services are expanded, and

WHEREAS, in spite of years of dedicated input by the Kentucky Medical Association to the Kentucky Medical Assistance Program through the Technical Advisory Committee on Physician Services, the Medical Assistance Advisory Council, numerous special meetings with Cabinet for Human Resources officials and legislative hearings, suggestions about Program shortcomings have been largely ignored, and

WHEREAS, we believe that many programs established by Medicaid, such as the Citicare Program, as presently constituted are operating to the detriment of physician and patient alike, and have been designed only to cut the cost of medical service to the poor, now therefore be it

RESOLVED, that KMA pursue all reasonable channels to promote adequate financing of the Medicaid Program for the provision of vital primary medical services, and be it further

RESOLVED, that KMA pursue all reasonable channels to preserve and promote full funding for primary medical services prior to expansion through new or nonmedical services, and be it further

RESOLVED, that KMA can no longer support the present operation of the Kentucky Medical Assistance Program, nor can it encourage its members to participate in a program which is clearly detrimental to the medical welfare of the indigent population of the Commonwealth, and be it further

RESOLVED, that KMA urge each member to consider his or her relationship with the Medicaid Program and determine the individual method of fulfilling the medical care obligation to the indigent, and be it further

RESOLVED, that the Kentucky Medical Association assist physicians in educating patients and citizens about the problems of the Kentucky Medical Assistance Program.

Substitute Resolution S
Fayette County Medical Society
Medical Care Access for the Poor

WHEREAS, concerns related to access to health care services for many of Kentucky's needy citizens continue to escalate due to economic and revenue problems, declining financial coverage of the Medicaid Program, and limitations of cost shifting options, and

WHEREAS, the Kentucky Medical Association is concerned about the consequences these problems create for Kentucky's citizens, and

WHEREAS, Kentucky physicians share in the broader concern for indigent patients, now therefore be it

RESOLVED, that the Kentucky Medical Association evaluate and, if feasible, recommend a mechanism(s) and information system(s) to improve and facilitate access of indigent patients, including Medicaid patients, to health care services, and be it further

RESOLVED, that KMA evaluate and recommend financing options to appropriate third parties and units of government who have either the opportunity or the responsibility to pay for the care of needy patients.

Recommendations, Reference Committee No. 5:

The Committee next considered Substitute Resolution S, submitted by Fayette County Medical Society, and recommends it be adopted.

Resolution V
Board of Trustees
Health Hazards to Kentucky's High School Athletes

WHEREAS, competition is scheduled in the State's high school football program as early as the second week in August, and

WHEREAS, some of the State's high school teams begin contact practice sessions at least 30 days prior to their first competition, and

WHEREAS, this practice and competition subjects the State's youth to exposure to the highest heat and humidity of the summer, and

WHEREAS, the Committee on School Health, Physical Education and Medical Aspects of Sports has been monitoring these conditions for years and has taken steps through educational programs for coaches, trainers and officials to work to prevent heat exhaustion and

heat stroke and promote conditioning to address these problems, and

WHEREAS, the risk to the State's football and soccer players from these health hazards is becoming more acute each year, now therefore be it

RESOLVED, that the Kentucky Medical Association encourage and work with the Kentucky High School Athletic Association to accomplish the following:

1. Reevaluate the football scheduling process to ensure that no competition begins before the first week of September;
2. Preliminary conditioning sessions prior to competition held in early morning hours prior to excessive heat conditions or in the evening when heat has abated;
3. Take appropriate measures to insure that the State's high school athletes receive the proper conditioning and necessary fluids when competing in extreme heat and humidity;
4. Develop guidelines by which game officials may cancel games due to extreme heat conditions and work with the Kentucky High School Athletic Association to devise a satisfactory plan to implement these;
5. Offer the resources of KMA to help insure the health of the State's high school athletes who compete during the excessive heat and humidity of Kentucky's summer and early fall periods.

Recommendations, Reference Committee No. 5:

The Committee next considered Resolution V, submitted by the Board of Trustees, and recommends that the following substitute wording be adopted in place of the existing sub-paragraph 1 of the "Resolved":

1. **Reevaluate the football scheduling process and, if necessary, extend the football season into December;**

Reference Committee No. 5 recommends the adoption of Resolution V, as amended.

Danny M. Clark, M.D., Pulaski County, was recognized by the chair. He made a motion that the Reference Committee's recommendation be rejected, and Resolution V be adopted as amended by deleting in the Resolved the words, "encourage and," and the words, "to accomplish the following," and by further deleting subparagraphs one (1) through five (5).

The motion was seconded, and following a lengthy discussion, carried on a hand vote of 87 in favor of the motion and 48 opposed.

(Resolution V, adopted as amended, is printed below in its final form:)

Resolution V (As Amended)
Board of Trustees
Health Hazards to Kentucky's High School Athletes

WHEREAS, competition is scheduled in the State's high school football program as early as the second week in August, and

WHEREAS, some of the State's high school teams begin contact practice sessions at least 30 days prior to their first competition, and

WHEREAS, this practice and competition subjects the State's youth to exposure to the highest heat and humidity of the summer, and

WHEREAS, the Committee on School Health, Physical Education and Medical Aspects of Sports has been monitoring these conditions for years and has taken steps through educational programs for coaches, trainers and officials to work to prevent heat exhaustion and heat stroke and promote conditioning to address these problems and,

WHEREAS, the risk to the State's football and soccer players from these health hazards is becoming more acute each year, now therefore be it

RESOLVED, that the Kentucky Medical Association work with the Kentucky High School Athletic Association and offer the resources of KMA to help insure the health of the State's high school athletes who compete during the excessive heat and humidity of Kentucky's summer and early fall periods.

Mr. Speaker, I recommend the adoption of the Report of Reference Committee No. 5 as a whole as amended.

I would sincerely like to thank the other members of the Committee: David C. Liebschutz, M.D., Danville; Preston P. Nunnelley, Jr., M.D., Lexington; C. Ray Potts, M.D., Louisville; and N. H. Talley, M.D., Princeton, for their work. A special thanks to Ms. Martha Coombs for her assistance.

Reference Committee No. 5:
Raymond J. Timmerman, M.D., Ft. Thomas, Chairman
David C. Liebschutz, M.D., Danville
Preston P. Nunnelley, Jr., M.D., Lexington
C. Ray Potts, M.D., Louisville
N. H. Talley, M.D., Princeton

• Editorial Note: Unless otherwise indicated, the Reference Committee action on each report and Resolution was accepted as printed here. Any opposing action taken is stated in discussion following the item.

REPORT OF REFERENCE COMMITTEE NO. 6

Robert E. Norsworthy, M.D., Hartford
Chairman

Reference Committee No. 6 considered the following Reports:

38. Report of the Judicial Council
39. Report of the Rural Kentucky Medical Scholarship Fund Board of Directors
40. Report of the Physician-Attorney Liaison Committee
41. Report of the Membership Committee
42. Report of the Placement Services Committee
43. Report of the Committee on Constituion and Bylaws, with the following **exception**: Recommendation No. 1—referred to Reference Committee No. 1
44. Report of the McDowell House Board of Managers

ITEMS FOR CONSENT

Reference Committee No. 6 reviewed the following items and recommends they be adopted or filed as indicated, by the consent of the House, without discussion:

38. Report of the Judicial Council—filed
40. Report of the Physician-Attorney Liaison Committee—filed
41. Report of the Membership Committee—filed
42. Report of the Placement Services Committee—adopted
44. Report of the McDowell House Board of Managers—filed

Reference Committee No. 6 would like to express its appreciation to the authors of the reports, which have been filed or adopted, for the time and effort spent in gathering this information for the House of Delegates.

Report of the Judicial Council

The Judicial Council is appointed by the House of Delegates to render opinions on the ethics of medical practice, the propriety of members' actions, and to serve as a state level grievance body. While the number of patient grievances seems to have abated somewhat this year, we note that more efforts were devoted to reviewing member actions initiated by other physicians than in previous periods.

It is a policy of the Council that matters involving nonmembers are referred directly to the Board of Medical Licensure because of jurisdictional concerns. In its role as arbiter of the membership, the Council feels that it serves as a vital forum for education and communication, as well as a final adjudication source. In this capacity, the Council would like to thank all physicians who were contacted and assisted our efforts.

Litigation between physicians was one concern brought to the Council's attention this year. Likewise, instances of open criticism between members professionally have occurred. The Council would like to note that every member should consider the ramifications of indiscreet criticism. Random inflammatory statements do not serve the best interests of the patient, the public or the profession.

Several questions were received concerning advertising this year, possibly occasioned by Federal Trade Commission rulings in this area and new competitive modes of practice. As a general rule, no advertising by physicians is proscribed unless it is false or misleading. To assist the membership in making these determinations the Council is working on the development of a pamphlet of voluntary guidelines that address this issue.

In the area of practice matters, the Council was asked to consider the appropriateness of division of patient loads when partnerships were terminated. Practically, such decisions should be made, if possible, before the partnership is dissolved. If not possible, such a division should be made before any patient contacts occur. Gen-

erally, it would be difficult or impossible for the Judicial Council or any third party to arbitrate these types of disputes.

Other practice matters the Council reviewed concerned the reticence of one physician to transfer patient records to another physician, and physicians' encouragement of patients to have prescriptions filled only at a pharmacy directed by the physician. The Council advised the physicians that the transfer of patient records or transcripts of significant portions was in the patient's best interests, and that encouragement to use a given pharmacy was not appropriate unless limited resources were available.

In a similar matter, the Council ruled that dispensing drugs from a physician's office was not unethical, particularly in areas where pharmacy services were not available. However, where pharmacy services are reasonably accessible, this should be discouraged.

In membership matters, the Council considered a situation involving membership status. A member had asked to be reinstated after a period of membership revocation. The Council referred final determination of membership acceptance to the county society of jurisdiction with the suggestion that hospital medical staff input be sought in regard to the applicant. In regard to general membership status questions, the Council has requested that the Committee on Constitution and Bylaws review the Bylaws to determine if revisions to the section on membership are appropriate.

During the year, the Council nominated and the Board of Trustees appointed J. Campbell Cantrill, M.D., Georgetown, to fill the unexpired term of E. C. Seeley, M.D., Lexington, who resigned because of other professional commitments. All the Council members join me in wishing Doctor Seeley a deep vote of thanks for his dedication and contributions to our efforts. The Council is also grateful for the assistance of Trustees in conducting local investigations, when necessary, and I would like to express my personal thanks to the other Council members for their work on what have been some significant and difficult issues.

Glenn W. Bryant, M.D. Chairman

Report of the Physician-Attorney Liaison Committee

During the Association year, the joint committee has reviewed several inquiries and complaints relating to physician-attorney relationships. The vast majority of problems are handled very smoothly. The Committee, evenly represented by members appointed by the Kentucky Bar Association and the Kentucky Medical Association, searches for proper solutions and recommendations to avoid potential legal confrontations between the parties.

The single area which seems to create the most concern centers around consultation and deposition fees and the resulting misunderstandings that seem to occur. A major part of this problem emanates from a lack of person-to-person contact and signals a need for more effective communication between physicians and attorneys. Arrangements, clarified on an up-front basis, would eliminate much of the strain in our interprofessional relationships.

This Committee provides a forum for many of our mutual concerns and is the only mechanism by which physicians and attorneys can air their differences without resorting to the judicial system. We note that several local committees have been formed by county societies, and we congratulate them on their activities. We again call to the attention of all KMA members the existence of the Interprofessional Code and urge KMA members to adhere to its provisions.

Members appointed by the Bar Association have been very conscientious and extremely fair in their recommendations.

I want to acknowledge and thank members of the Committee for their hard work and to express to this Association our utmost appreciation for the opportunity to serve.

Thomas M. Marshall, M.D., Chairman

Report of the Membership Committee

The Membership Committee is actively pursuing programs that will encourage physicians to join the Association. One of our solicitation campaigns featured a series of brochures that debated the pros and cons of being affiliated with organized medicine. These brochures were mailed to nonmembers during the fall of 1982 and the summer of 1983. In the latter campaign we geared our solicitation efforts to physicians between the ages of 30 and 40. This particular age group represents a major portion of the physician population in the state. However, only 50% are members. In the fall campaign we obtained over 100 applications as a result

of our efforts. This represented a 10% return and the Committee was very pleased with the results.

The Committee is working with the larger county medical societies in following up to our solicitation program with a one-on-one campaign. Although the results of this effort are not conclusive at this time, it is apparent that our best recruiting tool is with the one-on-one approach. We feel, however, that the Committee's efforts must be supported by the general membership. It is the responsibility of each member to encourage their fellow colleagues to join and be active in the Assocation. Many of us would not have joined unless someone indicated an interest in our participation. One of the main reasons that people do not join is that they "are never asked." A form letter is not the answer but personal involvement on each physician's part is.

The Committee will continue to analyze the data provided by staff in determining target groups and intensifying its recruitment efforts on these particular groups. We now have approximately 70% of the student population as members; however our resident membership is very low. Even with numerous mailings, receptions and resident workshops, we have failed to attract many new resident members. It is estimated that over 50% of the residents training in Kentucky are from outside the state and it may be possible that many of these individuals do not wish to associate with Kentucky because of their plans to leave as soon as their training is completed.

The Medical Student Section which was formally recognized at the 1982 KMA House of Delegates Meeting, held its first annual meeting in August 1983. Of major interest to the MSS is their recruitment of students into the Membership. They have noted a 20% increase in membership during the past year. The students' most effective recruiting tool is the one-on-one campaign. With the successful completion of their first annual meeting, it is anticipated that the students will become more actively involved in organized medicine. They annually send representatives to the AMA/MSS meeting and maintain involvement not only at the national level but also in the state and at the universities.

The Committee revised the Roster format utilized last year and expanded it to include additional information on the physicians and their spouses. This information was published in the July issue of the KMA **Journal**. The Committee hopes that this publication will provide the membership with a resource of information that will assist them in being able to contact their fellow colleagues. Additional copies will be forwarded to various groups and public officials across the state as a means of identifying for the public those physicians whose active involvement in organized medicine signifies a high quality of health care.

As Chairman, I appreciate the efforts all state and county offices have undertaken toward membership development and wish to encourage all members to become actively involved.

Harold D. Haller, Sr., M.D., Chairman

ADDENDUM

The Membership Committee felt it appropriate to tabulate demographic information about the Membership and present these findings to the Association. The total Membership is 3,195. The figures for each distribution are as follows.

Age Distribution

Age	State Total	KMA Member Total	KMA Member % of State
20-30 yrs.	329	63	19.15
31-40 yrs.	2,036	1,032	50.69
41-50 yrs.	1,380	1,040	75.36
51-60 yrs.	1,004	809	80.50
61-70 yrs.	711	592	83.26
71-80 yrs.	365	263	72.05
81-90 yrs.	54	50	92.59
Total	5,879	3,849*	

*Some birthdates were not available.

The Membership Committee has already noted that the 31-40 year old group has the most potential for recruitment and has just completed an extensive campaign to recruit these individuals. You can review these figures and draw your own conclusions; however, one main underlying effect is the need to encourage the young physicians to become involved and active in organized medicine.

Specialty Distribution

Specialty	State Total	KMA Member Total	KMA Member % of State	% of KMA Membership by Specialty
Administrative Medicine	9	7	77.78	.17
Allergy	31	25	80.65	.63
Anesthesiology	260	165	66.53	4.21
Cardiology	104	73	70.19	1.86
Colon and Rectal Surgery	12	11	98.20	.28
Dermatology/Syphilology	66	56	84.85	1.43
Emergency Medicine	203	76	37.44	1.94
Eye, Ear, Nose and Throat	18	17	94.44	.43
Family Practice	814	620	76.17	15.83
Gastroenterology	27	22	81.48	.56
General Practice	434	288	66.36	7.35
Hematology	19	8	42.11	.20
Internal Medicine	781	438	56.08	11.03
Neurology	67	42	62.69	1.07
Nephrology	8	8	100.00	.20
Neurosurgery	55	39	70.91	.99
Obstetrics/Gynecology	359	262	72.98	6.69
Occupational Medicine	25	21	84.00	.53
Ophthalmology	158	126	79.75	3.21
Orthopedic Surgery	198	151	76.26	3.85
Otolaryngology	82	65	79.27	1.66
Pathology	173	103	59.54	2.63
Pediatrics	434	249	57.37	6.36
Plastic/Reconstructive Surgery	45	36	80.00	.92
Psychiatry	319	199	62.38	5.08
Public Health/Community Health	36	30	83.33	.77
Pulmonary Disease	43	29	67.44	.74
Radiology	299	214	71.57	5.47
Surgery	512	373	72.85	9.53
Thoracic Surgery	41	34	82.93	.87
Urology	120	103	85.83	2.63

KMA Membership Status

Membership Status	KMA Member Total	% of Membership
Active	3,336	85.22
Associate	98	2.50
Disabled	2	.05
Inactive	72	1.83
In Training	100	2.56
Life	305	7.79
Military	2	.05
Total	3,915	100.00

The data provided here does reflect a small percentage of error due to insufficient or incomplete data. However, it does give a very precise view of the KMA and its membership structure. The Committee hopes to utilize this information in further intensifying its recruitment efforts but again encourages the Membership to encourage their colleagues to join.

Report of the Placement Services Committee

The Placement Services Committee is pleased to announce the completion of the planning and implementation of the 5th Annual Physician Recruitment Fair. Since the House last met, the Committee has sponsored both the 4th and the 5th Annual Recruitment Fairs.

The 4th Annual Physician Recruitment Fair was held in Lexington on October 16, 1982. At that Fair over 150 candidates met with 65 exhibitors representing small communities and hospitals from across the state. The program continues to provide an ideal opportunity for both communities and physicians to meet with a number of communities or individuals in a short period of time, and by the most economical means. The candidates participating in the Fair have been rated by the communities as serious minded and ready to contemplate the selecton of a community in which to practice. Pre-registration for this program was higher than the final registration.

The 5th Annual Physician Recruitment Fair, which at the time this document was prepared had not been held, showed all signs of again being a sellout, and with the highest registration yet expected. The Committee made some major changes in the 1983 program by moving the date up six weeks and scheduling the program on campus. The program will truly have a fair atmosphere this year, and there is hope that the on-campus presentation will again draw a large crowd. The Association's investment in this project continues to provide numerous benefits, and makes the Association's efforts very visible to the citizens of Kentucky. We continue to receive extensive media coverage, and the Association receives very positive press during the presentation of the program. This program presently requires most of the Committee's time and efforts; however, we continue to monitor the Placement Services Office and determine what further changes could be made to provide additional services to physicians. We continue to serve as a clearinghouse of information for both physicians seeking and communities searching, for both part-time and full-time positions. Our services are provided free to any community or physician requesting them.

As Chairman, I wish to express my appreciation to members of the Committee who assisted with the development of this program and its presentation.

Don E. Cloys, M.D., Chairman

RECOMMENDATIONS:

1. The Committee on Placement Services recommends the continuation of the Annual Physician Recruitment Fair in 1984.

Report of the McDowell House Board of Managers

Quarterly meetings of the McDowell House Board of Managers have been held in the House in Danville during the past year. At each meeting the financial report, given by Mr. Edward H. Walter, Jr., Comptroller of Centre College, has been reviewed in detail by the Board. Particular attention was given to the costs and details of repairs necessary during the year. There are constantly recurring expenses in this very old House which require attention.

An annual insurance update was given by Mr. George Grider. This was reviewed and approved by the McDowell House Board.

The deterioration of the trees near the wall of the House on the north side has required removal and planting of new trees in this area. Funds up to $1,000 were approved for this purpose. It is hoped that individuals from the public and profession may wish to sponsor a tree in honor of someone.

From March 1, 1982, through March 1, 1983, the Auxiliary of the KMA contributed $15,088 for refurbishing the House. In addition, the gifts of a number of small items to the House were accepted with appreciation. Admissions to the House during the past year increased 50%, and Gift Shop sales increased by 100%, as compared with a similar period in the past year.

Interest in obtaining an Endowment Fund to support the House on a permanent basis has resurfaced during this year. Efforts have been made in that direction on many occasions in the past 30 years. A new Committee on Endowment has been authorized; Doctor Eugene Conner was appointed Chairman of that Committee.

During the past year eight new members have been appointed to this Board. These include Professor Richard M. Doughty of the University of Kentucky College of Pharmacy; Doctor Charles E. Martin of Lexington; Mrs. Gloria Martin of Lexington; Mrs. Nancy Stiles of Owensboro; Mrs. Sharon Nighbert of Lexington; Doctor G. Russell Shearer of Danville; Doctor William P. Baas of Danville; and Doctor Robert Sparkman, Honorary, of Dallas, Texas.

The House is in good condition at the present time and is being zealously supervised by the Board of Managers. The staff of the House at the present time is most satisfactory.

Laman A. Gray, Sr., M.D., Chairman

End of Consent Calendar Items

Report of the Rural Kentucky Medical Scholarship Fund, Inc.

The Scholarship Fund continues to provide financial assistance to medical students in return for their commitment to practice in an underserved area of the state. We have directly assisted over 500 medical students in our 37-year history. Our efforts have been made possible by the generous contributions of physicians, the public, and from the State.

Several years ago, in the Fund's zeal to provide financial assistance to all qualified medical students, we greatly reduced our reserves and nearly curtailed our loaning activity. I am happy to report that this trend has been reversed and we again have established a small reserve to assist in balancing our loan efforts.

The Fund has become heavily dependent on state support over the last several years, based mainly on the increasing demand for our resources and because of inflation. However, every year it is becoming increasingly harder to secure a contribution from the State. Last year, for the first time, the State began requiring additional provisions before providing us with these funds. Whereas, the Board has always cooperated with the State, and provided the State with detailed information of the fund's activities, the State now found it appropriate to commit the Fund to a contractual agreement. The Fund has always retained its independence and considers all funds provided to it as contributions. Since 1954, when the General Assembly voted by resolution to support the Scholarship Fund from time to time with contributions, the State has been the mainstay of our requests for contributions.

It has become apparent to the Scholarship Board that the State does not wish to provide us with financial assistance unless it has significant control of all operating procedures. From our review nationally of similar programs, the most successful is the Rural Kentucky Medical Scholarship Fund, which has been administered privately, and whose success rate can be compared to none. Many states have tried to emulate this program, but not with the success we have experienced.

Although the Scholarship Board will continue to work with the State and other corporations for contributions, we cannot enter into any agreement with any organization or State agency that would usurp the authority of the Board. We currently have approximately 100 students and residents in training who have entered the program based on our current protocol, and to change any portion of that would jeopardize the success of the program.

The Board must now reintensify its efforts to secure additional corporate contributions, and we appreciate the annual contributions provided by the Kentucky Medical Insurance Company and Ashland Oil Foundation. If we could extend our solicitation efforts to increase our corporate gifts and obtain additional support from the KMA membership, we could establish a special reserve that would enable the Fund to live on the investment income from this money, and to meet the loan requirements for future years.

Last year we were forced to deny 29 applications for loan assistance, but were able to provide 13 new loans. Although our applications are somehwat less than last year, we will nonetheless be unable to provide any new loans in 1983. We have sufficient funds to meet our loan renewals this year, but without an increase in contributions, we will not be able to make any new loans until 1985. This is regrettable, considering that 60% of the counties in Kentucky still require physicians' services. It is interesting to note that placement of a scholarship recipient is usually beneficial in attracting other physicians to an area. The small investment that has been made has provided numerous benefits to the citizens of Kentucky.

We have now instituted a public relations campaign to inform the legislators, business leaders, and county government officials across the state of the program's efforts and need for their support of the program. Their support would insure the program's continued, uninterrupted financial assistance to medical students. Even though there are a number of reports that would indicate a surplus of doctors by the end of the decade, there will still be a maldistribution of physicians in the rural part of the state. Incentive programs, such as the Scholarship Fund, are important for this continued effort. As I indicated before, the Scholarship Board will persist in its solicitation efforts and will continue to work with the State in trying to obtain assistance in preserving

this program. However, it is my opinion that we will have to seek assistance frm the general public, corporations, and other sources. Any assistance in contributions that the KMA membership can provide will be greatly appreciated and assist in keeping the Fund as productive as it has been in the past.

Henry Spalding, M.D., President

Recommendations, Reference Committee No. 6:

Reference Committee No. 6 reviewed the Report of the Rural Kentucky Medical Scholarship Fund Board of Directors. The Committee was made aware of recent negotiations between the Board of Directors of the Scholarship Fund and the Cabinet for Human Resources regarding funding that did not appear in the Report. These negotiations resulted in a compromise that will result in the State providing $150,000 to the Fund for the next year to continue the program, with future funding to become a line item appropriation in the Cabinet for Human Resources' biennial budget. The Reference Committee commends the Fund's Board for this accomplishment and recommends this Report be filed.

Report of the Committee to Study the Constitution and Bylaws

The Committee to Study the Constitution and Bylaws met in order to reconsider KMA's provision relating to "Life Membership" and a proposal for changing the dues structure for active members.

The need for a dues increase is well documented in the Report of the Chairman, Board of Trustees, and your attention is directed to that report. The Committee's task, pursuant to the directive of the Board, was to revise the Bylaws in accord with its recommendation. That has been done, and the revision proposed for your consideration as an amendment to the Bylaws is hereinafter set forth as Recommendation 1.

During the course of its reconsideration of the KMA Bylaw provision relating to "Life Membership," the Committee determined that our current method for handling this matter is closely akin to that used by the AMA, is effective, and therefore, warrants no change at this time. The Committee noted that AMA also calls for dues exemption where financial hardship is involved. In the AMA Bylaws this criterion is part of the same section as that pertaining to dues exemption based on retirement or the reaching of a specific age. However, the KMA Bylaws speak to this criterion for exemption in Chapter I, Section 1, and therefore, it was determined, fully address the needs of individuals in this area.

Robert L. McClendon, M.D., Chairman

Recommendations, Reference Committee No. 6:

Reference Committee No. 6 reviewed the Report of the Committee on Constitution and Bylaws. The Reference Committee recommends that the Committee on Constitution and Bylaws consider developing revised language to clarify the description of the category of Life Member, including the current reference to Chapter VI, Section 8, of the Bylaws. The Reference Committee further recommends that KMA develop a mechanism to notify members of their eligibility for Life Membership status. The Reference Committee recommends this report be filed, and that the recommendations of the Reference Committee be adopted.

Mr. Speaker, I recommend the adoption of the Report of Reference Committee No. 6 as a whole.

I would like to thank the members of the Reference Committee, Keith E. Ellis, M.D.; Howard Heringer, Jr., M.D.; Cecil D. Martin, M.D.; and Chalres H. Nicholson, MD., for their thoughtful consideration and careful deliberation of the matters discussed, and a special thanks to our secretary, Pam Wethington.

ADDENDUM TO REPORT OF REFERENCE COMMITTEE NO. 6

Reference Committee No. 6 considered the following Resolution, received during the second meeting of the House of Delegates:

WHEREAS, the KMA Bylaws call for AMA Delegates and Alternates to be members of the KMA Board of Trustees, and

WHEREAS, the KMA membership increases provide for one additional Delegate and Alternate Delegate to the AMA; e.g., an increase from three (3) Delegates and Alternates to four (4) Delegates and Alternates, and

WHEREAS, the present KMA Bylaws, setting forth a number of fourteen (14) as a majority will no longer be correct, now therefore be it

RESOLVED, that Chapter 6, Section 1, of the Bylaws be amended at line 14 to eliminate "to wit 14," so that sentence of the paragraph, as amended, will read, "A majority of the full Board, and a majority. . ."

After consideration, the Reference Committee recommends adoption of this Resolution.

Reference Committee No. 6:
Robert E. Norsworthy, M.D., Hartford, Chairman
Keith E. Ellis, M.D., Benton
Cecil D. Martin, M.D., Carrollton
Charles H. Nicholson, M.D., Lexington
Howard Heringer, M.D., Ft. Mitchell

Election of Officers

Cecil D. Martin, M.D., Carrollton, Chairman of the Nominating Committee, presented the slate of nominees for general officers, and each was elected by acclamation:

President-Elect	Charles C. Smith, Jr., M.D., Louisville
Vice President	Wally O. Montgomery, M.D., Paducah
Speaker, House of Delegates	Peter C. Campbell, Jr., M.D., Louisville
Vice Speaker, House of Delegates	Thomas L. Heavern, M.D., Highland Heights

The slate of nominees and results of the AMA Delegate and Alternate Delegate election were announced as follows:

2 Delegates for a two-year term (January 1, 1984 to December 31, 1985)	*Donald C. Barton, M.D., Corbin
	Lee C. Hess, M.D., Florence
	*Fred C. Rainey, M.D., Elizabethtown
1 Delegate for a one-year term (September 21, 1983 to December 31, 1984)	*Dwight L. Blackburn, M.D., Berea
	Lee C. Hess, M.D., Florence (nominated from the floor)
2 Alternates for a two-year term (January 1, 1984 to December 31, 1985)	*Harold L. Bushey, M.D., Barbourville
	*Wally O. Montgomery, M.D., Paducah
	Frank R. Pitzer, M.D., Hopkinsville
1 Alternate for a one-year term (September 21, 1983 to December 31, 1984)	*Russell L. Travis, M.D., Lexington

*Designates those elected by the House to the position indicated

Doctor Martin then submitted the following nominations for the offices of Trustees and Alternate Trustees on behalf of the district nominating committees:

First District	John D. Noonan, M.D., Paducah
Alternate	Fred D. Austin, III, M.D., Paducah
Third District	Henry R. "Hank" Bell, M.D., Elkton
Alternate	N. H. Talley, M.D., Princeton
Fourth District	Thomas R. Taylor, M.D., Elizabethtown
Alternate	Wreno M. Hall, M.D., Elizabethtown
Twelfth District	Danny M. Clark, M.D., Somerset
Alternate	David C. Liebschutz, M.D., Danville
Fourteenth District	Ronald D. Hall, M.D., Pikeville
Alternate	James R. Pigg, M.D., Pikeville

A motion was made, seconded, and carried that the above slate of nominees be elected.

Election of 1984 Nominating Committee

The following physicians were elected by the House of Delegates to serve as the Nominating Committee for the 1984 Annual Meeting:

Jerry W. Martin, M.D., Bowling Green, Chairman
James S. Brashear, M.D., Central City
C. Dale Brown, M.D., Paducah
E. Dean Canan, M.D., Louisville
Paul J. Sides, M.D., Lancaster

It was announced that the Board of Trustees would hold a reorganizational meeting on Thursday at noon in the Kentucky Room of the Ramada Inn.

Doctor Campbell adjourned the 1983 session of the House of Delegates at 9:05 p.m.

1983 CONSTITUTION AND BYLAWS OF THE KENTUCKY MEDICAL ASSOCIATION

CONSTITUTION

Article I. Name of the Association
Article II. Purpose of the Association
Article III. Component Societies
Article IV. Composition and Meetings of the Association
Article V. Officers
Article VI. House of Delegates
Article VII. Districts, Sections and District Societies
Article VIII. Board of Trustees
Article IX. Funds and Expenses
Article X. Referendum
Article XI. The Seal
Article XII. Amendments
Article XIII. Definitions

Article I. Name of Association

The name and title of this organization shall be the Kentucky Medical Association.

Article II. Purpose of the Association

The purpose of the Association shall be to federate and bring into compact organization the entire medical profession of the State of Kentucky and to unite with similar associations in other states to form the American Medical Association, with a view to the extension of medical knowledge; the advancement of medical science and charity; the evaluation of the standards of medical education; the enactment and enforcement of just medical laws; the promotion of friendly intercourse among physicians and the guarding and fostering of their material interests; the protection of the members thereof against unjust assaults upon their professional care, skill or integrity; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life.

Article III. Component Societies

Component societies shall consist of those medical societies which hold charters from this Association.

Article IV. Composition and Meetings of the Association

The Association shall consist of the members of the component societies, but the House of Delegates shall have authority to adopt such bylaws regulating the admission and classification of members as it may deem advisable. The Association shall hold an Annual Meeting and such Special Meetings as may be called pursuant to the bylaws.

Article V. Officers

Section 1. The officers of this Association shall be a President, a President-Elect, a Vice-President, a Secretary-Treasurer, a Speaker and Vice-Speaker of the House of Delegates, a Trustee and an Alternate Trustee from each district that may be established; and such other officers as may be provided for in the Bylaws.

Section 2. The eligibility, duties and terms of office of all officers of the Association shall be as prescribed in the Bylaws.

Section 3. All officers shall serve until their successors have been elected and installed.

Section 4. All officers shall be elected by the House of Delegates at its Regular Session and shall take office on the last day of the Annual Meeting.

Article VI. House of Delegates

Section 1. The House of Delegates shall be the legislative body of the Association and shall have power, by a two-thirds vote of all the delegates present at that session, to adopt bylaws to carry out the provisions of this Constitution and to provide for the government of the Association in any other manner not inconsistent with this Constitution. It shall meet in Regular Session, annually during the Annual Meeting of the Association, and may be called into Special Session under such conditions as may be prescribed in the bylaws.

Section 2. Delegates shall be members of and elected by component county societies in such a manner as may be provided in the Bylaws. Officers of the Association, Delegates and Alternate Delegates of the American Medical Association and five immediate Past Presidents shall be the ex-officio members of the House of Delegates and entitled to vote. All other Past Presidents and Vice-Presidents and Past Chairmen of the Board of Trustees shall be ex-officio members of the House. They shall have the right to speak and debate on the floor of the House but shall not have the right to make a motion, introduce business or an amendment, or vote.

Section 3. The House of Delegates shall elect a Speaker and a Vice-Speaker, one of whom shall preside during the meetings of the House of Delegates. The presiding officer shall not be entitled to a vote except in the event of a tie.

Section 4. The House of Delegates shall be the final judge as to the qualification of its members.

Article VII. Districts, Sections and District Societies

The House of Delegates shall divide the state into Districts composed of one or more counties, for administrative purposes. It may also provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such District Societies, composed exclusively of members of component societies, as will promote the best interests of the profession.

Article VIII. Board of Trustees

The House of Delegates shall make provision in the bylaws for a Board of Trustees composed of one Trustee from each District and such of the other officers of the Association as the House may deem appropriate, which shall be charged with the general direction of the Association's affairs during the interim between meetings of the House. The House may delegate such powers to the Board of Trustees as are not specifically required by this Constitution to be exercised by the House, and may limit the Board's powers to such extent as it may determine to be necessary or desirable, provided, however, that in no event shall the Board of Trustees have power to commit the Association to any course of action which is contrary to or at variance with any policy established by the House of Delegates.

Article IX. Funds and Expenses

The House of Delegates shall provide funds for meeting the expenses of the Association by such methods and from such sources as it may select. Funds may be appropriated by the House of Delegates to defray the expenses of the annual session, for publications, and for such other purposes as will promote the welfare of the Association and the profession.

Article X. Referendum

The membership of the Association, by written petition signed by not less than 10% of the active membership, may obtain a referendum on any question pending before the House of Delegates. The Secretary-Treasurer, upon the presentation of such a petition to him shall cause the question to be submitted to the active membership by mail, and if a majority of the active members shall signify its approval or disapproval of a certain policy or course of action with respect to the question thus submitted, the will of the majority shall determine the question and shall be binding upon the House of Delegates and the Association upon certification of the result of the vote by the Secretary-Treasurer to the President and Board of Trustees.

Article XI. The Seal

The Association shall have a common Seal with power to break, change or renew the same at pleasure.

Article XII. Amendments

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at the Regular Session, provided that such amendment shall have been presented in open meeting at the previous regular session, and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

Article XIII. Definitions

Whenever used in this Constitution, the Articles of Incorporation or the Bylaws—

(a) "County society," "component county society," or "component medical society" means "component society."

(b) "Annual Meeting" means the annual three-day meeting of the Association.

(c) "Scientific Sessions" mean those sessions during the Annual Meeting at which scientific subjects are programmed and discussed.

(d) "Regular Session" means the regular session of the House of Delegates which is held during the Annual Meeting.

(e) "Special Session" means a special, called meeting or session of the House of Delegates.

BYLAWS

Chapter I. Membership
Chapter II. Annual and Special Meetings of the Association
Chapter III. The House of Delegates
Chapter IV. Election of Officers
Chapter V. Duties of Officers
Chapter VI. Board of Trustees
Chapter VII. Discipline-The Judicial Council
Chapter VIII. Standing Committees and Councils
Chapter IX. Assessments and Expenditures
Chapter X. Rules of Conduct
Chapter XI. Rules of Order
Chapter XII. County Societies
Chapter XIII. Amendments

CHAPTER I. MEMBERSHIP

Section 1. Membership in this Association shall be coterminous with membership in a component county society. No physician shall be eligible for membership in this Association unless he is a member, in good standing of a component society, nor may he maintain membership in a component county society unless he is a member, in good standing of this Association.

When a physician who meets the qualifications hereinafter set forth, is certified to the Secretary-Treasurer as a member in good standing of a component society, properly classified as to type of membership, and when the dues pertaining to his membership classification have been received by the Secretary-Treasurer of the Association, the name of the member shall be included in the official roster of the Association and he shall be entitled to all the privileges of his class of membership. Provided, however, that members in good standing from other state societies may, if admitted to membership by a component society, be accepted by KMA for membership without paying dues for the remainder of the calendar year in which the transfer is made. Provided further, that the Board of Trustees shall have power, upon written application, approved annually by the county society of which the applicant is a member, to excuse any member from the payment of dues because of financial hardship. And provided further, that the Judicial Council, after a hearing, shall have power to condition membership in this Association upon the physician's agreement to limit the scope of his practice in any manner reasonably calculated to protect the public from the adverse effects of any demonstrated frailty or disability of said member.

Section 2. Membership in the Association shall be divided into nine classes, to-wit: Active, Life, In-Training, Associate, Inactive, Student, Service, Honorary and Special.

(a) Active Members. The active membership of the Association shall consist of the active members of the various component medical societies. To be eligible for active membership in any component society, the applicant must be a physician who holds an unrestricted or limited license to practice medicine and surgery in this state, and who is of good moral, ethical and professional standing. Nothing contained herein shall prevent a component society from requiring new members to occupy provisional status for a reasonable time after their admittance to membership under any classification.

(b) Life Members. Component societies may elect as a life-member any doctor of medicine or osteopathy who has served his profession with distinction and who has either reached the age of 70 or has retired from active practice. Life members shall have the right to vote and be entitled to the benefits of Chapter VI, Section 8 of these Bylaws, but shall not pay dues. They shall receive *The Journal* and other publications of the Association.

(c) In-Training Members, Interns, residents, and teaching fellows who are doctors of medicine or osteopathy and who have complied with all pertinent regulations of the Kentucky State Board of Medical Licensure. In-training members shall have the right to vote and receive all publications of the Association, but shall not be counted in determining the number of delegates to which their county society is entitled in the House of Delegates.

(d) Associate Members. The associate membership of the Association shall consist of the associate members of the various component medical societies. To be eligible for associate membership in any component society, the applicant must qualify under one or more of the following groups:

(1) Medical officers of the United States Army, Navy, Air Force, Veterans Administration, Public Health Service, or other federal governmental service while on duty in the State, but shall not be deemed to include physicians employed on a full-time basis by the Veterans Administration.

(2) Dentists may be invited to become Associate members.

(3) Physicians residing and/or practicing in communities bordering Kentucky who are active members of their home state and county societies and who wish to become members of KMA on an other than active basis may become Associate Members.

Associate members shall not have the right to vote nor to hold office, but shall receive *The Journal* and other publications of the Association.

(e) Inactive Members. The inactive membership of the Association shall consist of the inactive members of the various component county societies. Any doctor of medicine licensed to practice medicine in Kentucky who is not engaged in the practice of medicine but who is otherwise eligible for active membership in the Association may be admitted to inactive membership by any component county society. Inactive members shall not have the right to vote nor hold office, but shall receive *The Journal* and other publications of the Association.

(f) Student Members. Any student in an accredited medical school in Kentucky or any resident of Kentucky who is a student in an accredited medical school in the United States shall be eligible for membership in the Medical Student Section of the Kentucky Medical Association. This Medical Student Section shall be governed by its own Constitution and Bylaws, which Constitution and Bylaws shall not be in conflict with those of the parent Kentucky Medical Association. In order to insure the absence of any such conflict, the initial Constitution and Bylaws of the Student Section, as well as any later amendments thereto, shall be given prior approval by a majority of all Delegates present at the Annual Meeting of the KMA House of Delegates. Individual students may apply directly to the State Association for membership and be assigned to the county society of their choice. The determination of such membership shall be coincident with the academic year of the institution in which the student is enrolled. Student members may not hold office in the State Association, but may be voting members of any State Association committee to which they are appointed. Student members may, however, hold office within the Student Section in accord with the provisions of that Section's Constitution and Bylaws. The Student Section will be represented in the House of Delegates through one voting representative, a student member of the Kentucky Medical Association elected by the Student Section membership attending the University of Kentucky College of Medicine and one voting representative, a student member of the Kentucky Medical Association elected by the Student Section membership attending the University of Louisville School of Medicine.

(g) Service Members. Members of the Association in good standing who enter military service and are ineligible for Association membership shall be classified as service members. Service Members shall not be required to pay dues. If a member in good standing enters service prior to April 1 and has paid his dues for that year, he shall receive all publications and other benefits applicable to his class of membership in the Association and shall owe no further dues until January 1 following his release. If a member in good standing enters service prior to April 1 without paying his dues for that year, he shall receive publications and other benefits but shall owe the dues applicable to his class of membership immediately following his release from active duty. Members whose dues have not been received by April 1 are not in good standing.

(h) Honorary Members. Any physician possessed of scientific attainments who is a member of a constituent state medical association and who has participated in the program of the scientific session and who is not a citizen of Kentucky may by unanimous vote of the House of Delegates be elected to honorary membership. Honorary members shall be entitled to the privileges of the floor in all scientific sessions.

(i) Special Members. Component societies may invite pharmacists, funeral directors, or other professional persons to become special members. Special members shall have no rights or obligations under these Bylaws, but may be accorded the privilege of attending and participating in the scientific meetings of the society, provided, however, that a registration fee may be required of special members who desire to attend the Annual Meeting of the Association.

Section 3. Guests of Honor. Any distinguished physician not a resident of this State may become a guest of honor during any Annual Meeting upon invitation of the Board of Trustees and shall be accorded the privilege of participating in all of the scientific work of that meeting.

Section 4. No person who is finally convicted of a felony subsequent to September 26, 1968, shall be eligible for membership in this Association unless and until, upon proper application to the Judicial Council, it is determined that he is morally and ethically qualified. Except as provided in Chapter VII, Section 4 of these Bylaws, no person who is under sentence of suspension or expulsion from any component society of this Association shall be entitled to any of the rights or benefits of membership of this Association.

CHAPTER II. ANNUAL AND SPECIAL MEETINGS OF THE ASSOCIATION

Section 1. The Association shall hold its annual and special meetings at such times and places as may be determined by the House of Delegates.

Section 2. The Annual Meeting shall consist of one or more scientific sessions, at least two meetings of the House of Delegates, and such other gatherings as may be authorized by the Board of Trustees. Each scientific session shall be presided over by the President or in his absence or disability or at his request by the President-Elect or such officers as the Board of Trustees may direct. The entire time of the scientific sessions, as far as may be, shall be devoted to papers and discussions related to scientific medicine.

Section 3. The name of a physician upon the properly certified roster of members or list of delegates of a component society which has paid its annual assessment, shall be prima facie evidence of his right to register at any meeting of this Association.

Section 4. Each member in attendance at any meeting shall register indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of the society, he shall receive a badge which shall be evidence of his right to all privileges of membership at that meeting. No member or delegate shall take part in any of the proceedings of any meeting until he has complied with the provisions of this section.

CHAPTER III. THE HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet in Regular Session at the time and place of the Annual Meeting, and shall, insofar as is practicable, fix its hours of meeting so as to give delegates an opportunity to attend the scientific sessions and other proceedings. Provided, however, that if the business interests of the Association and profession require, the Speaker, with the consent of the Board of Trustees, may convene the Regular Session in advance of the Annual Meeting, and the House may remain in session after the final adjournment thereof.

Section 2. The House may be called into Special Session by the President with the approval of the Board of Trustees, and a special session shall be called by the President on the written request of fifty duly elected delegates of the Association. The purpose of all special sessions shall be stated in the call, and all business transacted at any such special session shall be germane to the stated purpose.

Section 3. When a special session is called, the Secretary-Treasurer shall mail a notice of the time, place, and purpose of such meeting to the last known address of each delegate at least ten days before such session.

Section 4. The Speaker shall, by virtue of his office, be responsible for making all arrangements for all sessions, regular or special, of the House.

Section 5. The members of the House of Delegates shall be elected by the various component societies in the manner prescribed in Chapter XII of these Bylaws.

Section 6. In the event a component society is not represented at any meeting of the House, the Speaker shall consult with any officer of the component society who is in attendance and, with the approval of the Credentials Committee, may appoint any active member of such component society who is in attendance, as its alternate delegate. If no officer of such society is present, the Speaker may make the appointment without consultation, but with the approval of the Credentials Committee. All such appointments shall also be subject to the approval of the House.

Section 7. Forty per cent of the qualified delegates, as defined by Article VI of the constitution, shall constitute a quorum and all of the meetings of the House shall be open to the members of the Association. The House shall have the right to go into executive session whenever in its judgment such action is indicated; except that active members of the Association shall have the right to attend all executive sessions.

Section 8. Each resolution introduced into the House shall be in writing and signed by the author and presented to the Secretary-Treasurer following its introduction. If the author presenting the resolution presents it as an individual member of the Kentucky Medical Association, the resolution shall be signed by him. If the author be a group of members or component society, the resolution shall be signed by the authorized spokesman for that group. Immediately after the resolution has been introduced, it shall be referred to the proper Reference Committee before action thereon is taken.

Section 9. No resolution shall be introduced in the first meeting of the House of Delegates by any member or group of members other than the Board of Trustees unless a copy thereof was furnished to the Headquarters Office at least seven days prior to its introduction. The only exception to this shall be that a resolution which has been signed by ten or more members of the House of Delegates and of which there are sufficient printed copies to distribute to each member of the House of Delegates may be received for consideration by an affirmative vote of three-fourths of the members present and voting. No new business shall be introduced in the last meeting of the House without unanimous consent, except when presented by the Board of Trustees. All new business so presented shall require the affirmative vote of three-fourths of those delegates present and voting, for adoption.

Section 10. The House shall give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each Annual Meeting a stepping stone to further ones of higher interest.

Section 11. It shall consider and advise as to the material interest of the profession, and of the public in those important matters wherein the public is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse information in relation thereto.

Section 12. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality and shall continue these efforts until every physician in every county of the State who will agree to abide by the constitution, bylaws and other rules and regulations of the Association and the appropriate component society, has been brought under medical society influence.

Section 13. It shall encourage postgraduate work in medical centers as well as home study and research and shall endeavor to have the results of the same utilized and intelligently discussed in the county societies.

Section 14. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and Bylaws of that body.

Section 15. It shall, upon application, provide and issue charters to county societies organized in conformity with the Constitution and Bylaws of this Association.

Section 16. The state shall be divided into the following districts:
No. 1—Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, Livingston, McCracken, and Marshall.
No. 2—Daviess, Hancock, Henderson, McLean, Ohio, Union, and Webster.
No. 3—Caldwell, Christian, Crittenden, Hopkins, Lyon, Muhlenberg, Todd, and Trigg.
No. 4—Breckinridge, Bullitt, Grayson, Green, Hardin, Hart, Larue, Marion, Meade, Nelson, Taylor, and Washington.
No, 5—Jefferson.
No. 6—Adair, Allen, Barren, Butler, Cumberland, Edmonson, Logan, Metcalf, Monroe, Simpson, and Warren.
No. 7—Anderson, Carroll, Franklin, Gallatin, Grant, Henry, Oldham, Owen, Shelby, Spencer, and Trimble.
No. 8—Boone, Campbell, and Kenton.
No, 9—Bath, Bourbon, Bracken, Fleming, Harrison, Mason, Nicholas, Pendleton, Scott, and Robertson.
No. 10—Fayette, Jessamine, and Woodford.
No. 11—Clark, Estill, Jackson, Lee, Madison, Menifee, Montgomery, Owsley, Powell, and Wolfe.
No. 12—Boyle, Casey, Clinton, Garrard, Lincoln, McCreary, Mercer, Pulaski, Rockcastle, Russell, and Wayne.
No. 13—Boyd, Carter, Elliott, Greenup, Lawrence, Lewis, Morgan, and Rowan.
No. 14—Breathitt, Floyd, Johnson, Knott, Letcher, Magoffin, Martin, Perry, and Pike.
No. 15—Bell, Clay, Harlan, Knox, Laurel, Leslie, and Whitley.
District meetings may be held as desired, and District Medical Associations may be organized as desired, according to the districts outlined above.

Section 17. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

Section 18. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective, except as provided in Chapter VI, Section 4, and except for the selection of the recipient of the Kentucky Medical Association Award (Outstanding Layman) and Distinguished Service Award (Outstanding Physician), which selections shall be made by the KMA Awards Committee.

Section 19. A digest of proceedings of the House of Delegates shall be published and distributed to the membership annually.

CHAPTER IV. ELECTION OF OFFICERS AND DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

Section 1. The President-Elect and the Vice President shall be elected from the state at large for a term of one year, the President-Elect succeeding to the presidency at the expiration of his term as President-Elect. A majority vote of those attending and voting shall be required for the election of the President-Elect and the Vice President and on any ballot where a majority is not obtained, the candidate with the least votes shall be dropped and further balloting held until such time as one candidate receives a majority of the votes cast. Delegates to the AMA and their alternates shall be elected from the state at large for terms of two years with the provision that no more then one delegate and no more than one alternate delegate shall be elected from one component society. The Speaker of the House of Delegates, the Vice-Speaker and the Secretary-Treasurer shall be elected for terms of three years. Trustees and their Alternates shall be elected for terms of three years and Trustees shall be limited to serving for not more than two consecutive full terms. The terms of the Trustees and their Alternates shall coincide and be so arranged that one-third of the terms expire each year, insofar as possible, provided, however, that nothing contained herein shall preclude an Alternate Trustee from serving two full terms as a Trustee. No member shall be eligible for the office of President, President-Elect, Vice-President, Secretary-Treasurer, Speaker or Vice-Speaker of the House of Delegates, Trustee or Alternate Trustee who has not been an active member of the Association for at least three years.

Section 2. During the last meeting of the regular session of the House of Delegates, the Speaker of the House of Delegates shall submit to the members of the House of Delegates a list of ten names from which, by ballot, the House of Delegates shall select five members to serve as the Nominating Committee for the next year. The five names receiving the most votes shall form the Committee, and the person receiving the most votes shall be Chairman. In the event that the Chairman so elected is unable or unwilling to serve, or in the event of a tie, the Committee shall elect one of its members as Chairman. The Committee shall meet at such time and place as determined by the Committee Chairman or the Board of Trustees, and shall schedule an open meeting immediately after the close of the first meeting of the House at each Annual Meeting. This open meeting shall be held in the meeting place of the House of Delegates, shall receive broad publicity, and those who have business to discuss with the committee shall have a hearing. The Nominating Committee shall verify the eligibility and willingness to serve of each candidate nominated. The Committee shall accept and post for information all eligible and willing candidates proposed for offices elected from the state at large. Before noon of the day following the opening meeting, the committee shall post on a bulletin board near the entrance to the hall in which the Annual Meeting is being held, its nomination, or nominations, for each office to be filled, and shall formally present said nomination, or nominations, to the House at the time of the election. Additional nominations may be made from the floor by submitting the nominations without discussion or comment. Vacancies occurring on the Nominating Committee by virtue of death, resignation, or disability, shall be filled by appointment of the Speaker.

Section 3. The election of officers and delegates to the AMA and their alternates shall be held at the second meeting of the regular session of the House of Delegates.

Section 4. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect, provided, however, that when there are more than two nominees, the nominee receiving the least number of votes on the first ballot shall be dropped and the balloting shall continue in like manner until an election occurs.

Section 5. Any member may make known his availability for any office within the gift of the Association. However, it would be regarded as unseemly for any member to actively campaign for his own election.

Section 6. The Delegates representing the counties in each District form the Nominating Committee for the purpose of nominating a Trustee and an Alternate Trustee for the District concerned. This committee shall hold a well publicized meeting open to all active members of the District concerned who are in attendance at the Annual Meeting for the purpose of discussing the nomination of the Trustee and his Alternate to serve the District. Additional nominations may be made from the floor when the Nominating Committee makes its report to the House of Delegates.

CHAPTER V. DUTIES OF OFFICERS OTHER THAN TRUSTEES AND ALTERNATES

Section 1. Except as provided in Chapter II, Section 2 hereof, the President shall preside at all scientific sessions of the Association and shall appoint all committees not otherwise provided for. He shall deliver an annual address at such time as may be arranged and shall perform such duties as custom and parliamentary usage may require. He shall be the real head of the profession in the State during his term of office and so far as practicable, shall visit or cause to be visited on his behalf, the various sections of the State and assist the Trustees in building up the county societies and in making their work more practical and useful. He shall be reimbursed for his reasonable and necessary travel expense incurred in the performance of his duties as President.

Section 2. The President-Elect shall assist the President in visitation of county and other meetings. He shall become president of the Association at the next Annual Meeting following his election as president-elect. In the event of his death or resignation, or if he becomes permanently disqualified or disabled, his successor shall be elected by the House of delegates and shall be installed as President of the Association at its next regular session.

Section 3. The Vice President shall assist the President in the discharge of his duties, and shall perform such other duties as may be prescribed by the Board of Trustees. In the event of a vacancy in the office of the President, the Vice-President shall succeed to the office of the President.

Section 4. The President-Elect and the Vice-President, when acting for and in behalf of the President, may be reimbursed for their reasonable and necessary travel expenses incurred in the performance

of their duties in such amounts as may be available out of the sum appropriated in the annual budget for traveling expenses.

Section 5. The Speaker of the House shall preside at all meetings of the House of Delegates. He shall appoint all committees of the House of Delegates with the approval of the House of Delegates. He shall be a non-voting member of said committees, and shall perform such other duties as custom and parliamentary usage may require.

Section 6. The Vice Speaker shall assume the duties of the Speaker in his absence and shall assist the Speaker in the performance of his duties. In the event of the death, disability, resignation, or removal of the Speaker, the Vice Speaker shall automatically become Speaker of the House of Delegates.

Section 7. The Secretary-Treasurer shall advise the Executive Vice President in all administrative matters of this Association and shall act as the corporate secretary insofar as the execution of official documents or institution of official actions are required. He shall perform such duties as are placed upon him by the Constitution and Bylaws, and as may be prescribed by the Board of Trustees. The Secretary-Treasurer shall demand and receive all funds due the Association, including bequests and donations. He shall, if so directed by the House of Delegates, sell or lease any real estate belonging to the Association and execute the necessary papers and shall, subject to such direction, have the care and management of the fiscal affairs of the Association. All vouchers of the Association shall be signed by the Executive Vice President or his designee and shall be countersigned by the Secretary-Treasurer of the Association. When one or more of the above-named officials are not readily available, four specifically designated representatives of the Executive Committee are authorized to countersign the vouchers, provided that in any event all vouchers of the Association shall bear a signature and a countersignature. The four members of the Executive Committee authorized to countersign vouchers shall be designated by the Board during their reorganizational meeting in September and, whenever possible should be easily accessible from the KMA Headquarters Office. All those authorized to countersign vouchers shall be required to give bond in an amount to be determined by the Board of Trustees. The Secretary-Treasurer shall report the operations of his office annually to the House of Delegates, via the Board of Trustees, and shall truly and accurately account for all funds belonging to the Association and coming into his hands during the year. His accounts shall be audited annually by a certified public accountant appointed by the Board of Trustees.

CHAPTER VI. BOARD OF TRUSTEES

Section 1. The Board of Trustees shall be the executive body of the House of Delegates and between sessions of the House of Delegates shall exercise the powers conferred upon the House of Delegates by the Constitution and Bylaws. The Board of Trustees shall consist of the duly elected Trustees and the President, the President-Elect, the Vice-President, the immediate Past-President, the Speaker, and Vice-Speaker of the House of Delegates, the Secretary-Treasurer, and the Delegates and Alternate Delegates to the American Medical Association. The Executive Committee of the Board of Trustees shall consist of the President, the Vice-President, the President-Elect, the Secretary-Treasurer, the Chairman of the Board of Trustees, the Vice Chairman of the Board of Trustees, and two Trustees to be elected annually by the Board of Trustees. A majority of the full Board, and a majority of the full Executive Committee, to-wit, 5, shall constitute a quorum for the transaction of all business by either body. Between sessions of the Board, the Executive Committee shall exercise all of the powers belonging to the Board except those powers specifically reserved by the Board to itself.

Section 2. The Board shall meet daily, or as required, during the Annual Meeting of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Trustees. It shall meet on the last day of the Annual Meeting for reorganization and for the outlining of the work for the ensuing year. It shall, through its Chairman, make an annual report to the House of Delegates at such time as may be provided, which report shall include an audit of the accounts of the Secretary-Treasurer and other agents of this Association and which shall also specify the character and cost of all the publications of the Association during the year, and the amounts of all other property belonging to the Association, or under its control, with such suggestions as it may deem necessary. By accepting or rejecting this report, the House may approve or disapprove the action of the Board of Trustees in whole or in part, with respect to any matter reported upon therein. In the event of a vacancy in any office other than that of President, the Board may fill the same until the annual election.

Section 3. Each Trustee shall be organizer, peacemaker and censor for his district. He shall hold at least one district meeting each year for the exchange of views on problems relating to organized medicine and for postgraduate scientific study. The necessary traveling expenses incurred by a Trustee in the line of his duties herein imposed may be paid by the Secretary-Treasurer upon a proper itemized statement but this shall not be constituted to include his expenses in attending the Annual Meeting of the Association.

Section 4. The Board shall have the authority to communicate the views of the profession and of the Association in regard to health, sanitation, and other important matters, to the public and press.

Section 5. The *Journal of the Kentucky Medical Association* shall be the official organ of the Association and shall be published under the supervision of the Board. The Editor of the *Journal* shall be elected by the Board. All money received by the *Journal* or by any member of its staff on its behalf, shall be paid to the Secretary-Treasurer on the first of each month. The Board shall provide for and superintend the publication and distribution of all proceedings, transactions, and memoirs of the Association, and shall have authority to appoint such assistants to the Editor as it deems necessary.

Section 6. All commercial exhibits during the Annual Meeting shall be within the control and direction of the Board.

Section 7. In the event of the death, resignation, removal or disability of a Trustee, between sessions of the House of Delegates, the Alternate Trustee shall succeed to the office of Trustee. In the case of disability, the Alternate shall serve until the disability is removed or the Trustee's term expires, and in the absence of the Trustee, the Alternate Trustee shall vote in his place and stead.

Section 8. The Association, upon the request of any member in good standing who is a defendant in a professional liability suit, will provide such member with the consultative service of competent legal counsel selected by the Secretary-Treasurer acting under the general direction of the Executive Committee. In addition, the Association may, upon application to the Board outlining unusual circumstances justifying such action, provide such member with the services of an attorney selected by the Board to defend such suit through one court.

Section 9. The Board shall employ an Executive Vice President whose principal duty shall be to carry out and execute the policies established by the House of Delegates and the Board. His compensation shall be fixed by the Board. The Executive Vice President shall act as general administrative officer and business manager of the Association and shall perform all administrative duties necessary and proper to the general management of the Headquarters Office, except those duties which are specifically imposed by the Constitution and Bylaws upon the officers, committees, councils and other representatives of the Association. He shall refer to the various elected officials all administrative questions which are properly within their jurisdiction.

He shall attend the Annual Meeting, the meetings of the House of Delegates, the meetings of the Board, as many of the committee and council meetings as possible, and shall keep separately the records of their respective proceedings. He shall, at all times, hold himself in readiness to advise and aid, so far as is possible and practicable, all officers, committees, and councils of the Association in the performance of their duties and in the furtherance of the purposes of the Association. He shall be allowed traveling expenses to the extent approved by the Board.

He shall be the custodian of the general papers and records of the Association (including those of the Secretary-Treasurer) and shall conduct the official correspondence of the Association. He shall notify all members of meetings, officers of their election, and committees and councils of their appointment and duties.

He shall account for and promptly turn over to the Secretary-Treasurer all funds of the Association which come into his hands. It shall be his duty to receive all bills against the Association, to investigate their fairness and correctness, to prepare vouchers covering the same, and to forward them to the Secretary-Treasurer for appropriate action. He shall keep an account with the component societies of the amounts of their assessments, collect the same, and promptly turn over the proceeds to the Secretary-Treasurer. He shall, within thirty days preceding each Annual Meeting, submit his financial books and records to a certified public accountant, approved by the Board, whose report shall be submitted to the House of Delegates.

He shall keep a record of all physicians in the State by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association.

He shall act as Managing Editor, or otherwise supervise the publication of *The Journal of the Kentucky Medical Association* and

such other publications as may be authorized by the House of Delegates, under the guidance and direction of the Board.

He shall perform such additional duties as may be required by the House of Delegates, the Board, or the President, and shall employ such assistants as the Board may direct. He shall serve at the pleasure of the Board, and in the event of his death, resignation, or removal, the Board shall have the power to fill the vacancy. From time to time, or as directed by the Board, he shall make written reports to the Board and House of Delegates concerning his activities and those of the Headquarters Office.

CHAPTER VII. DISCIPLINE—THE JUDICIAL COUNCIL

Section 1. There is hereby created a Judicial Council composed of the Secretary-Treasurer of the Association and four members to be elected by the House of Delegates for terms of four years each. One member shall be elected from each of the traditional eastern, western, and central districts, and one member from the state at large. Members of the first Judicial Council shall be elected for terms of one, two, three, and four years, respectively so that thereafter, one member will be elected each year. The Council shall annually elect a chairman.

To be eligible for membership on the Judicial Council, a nominee shall possess at least one of the following qualifications: (1) Have served one term as an officer, trustee, or a Delegate to the AMA or (2) Have served five years as a member of the House of Delegates.

It shall be the duty of the Board of Trustees to nominate at least one candidate for each vacancy on the Judicial Council, but additional nominations may be made from the floor. Vacancies which occur between Regular Sessions of the House of Delegates, shall be filled by the Board of Trustees. No member, other than the Secretary-Treasurer shall serve more than two consecutive terms.

Section 2. The Judicial Council shall be the Board of Censors of the Association. It shall be the final arbiter of all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Association. All charges of breach of medical ethics brought before the House of Delegates shall be referred to the Judical Council without discussion. A member who has been convicted of a felony or of any violation of the Medical Practice Act, or who violates any of the provisions of the constitution, bylaws, or any rule or regulation of this Association, or the Principles of Ethics of the American Medical Association shall be liable to censure, fine, suspension, or expulsion upon order of the Judical Council. Provided, however, that if in addition to discipline by the Association, the Judicial Council shall be of the opinion that the offending member's license to practice medicine should be revoked, it shall report this to the Board of Trustees as a recommendation that the Board refer the matter to the State Board of Medical Licensure for this purpose.

Suspension shall be for a specified period during which the member shall remain liable for the payment of dues but shall not be eligible to hold office, attend business meetings or otherwise participate in Associational activities at the county, district or state levels. Upon the expiration of the period of suspension, every suspended member shall be automatically restored to all of the rights and privileges of his class of membership unless the Judicial Council determines that his conduct during the period of suspension indicates that he is unworthy of such restoration, in which event his suspension may be extended or he may be expelled.

Upon the complaint of any member or aggrieved individual involved, the Judicial Council may initiate disciplinary proceedings against any member, and may intervene in or supersede county, individual trustee, or district disciplinary proceedings, whenever in its sole judgment and opinion, a disciplinary matter is not being handled in an expeditious manner, and may render a decision therein. In all cases in which the Association, rather than a member or aggrieved individual, appears to be the real party in interest, the Judicial Council may refer the complaint to the Board of Trustees for a determination as to whether probable cause for disciplinary action exists. If the Board of Trustees resolves this question in the affirmative, it shall so charge the respondent, and a representative of the Board shall thereupon be responsible for presenting the evidence in support of such charge at any hearing held thereon.

In all proceedings of the Judicial Council, the due process requirements of reasonable notice and a full and fair hearing shall be observed. No recommended disciplinary decision of an individual trustee or any district grievance committee shall become effective unless and until approved by the Judicial Council.

Section 3. It shall consider all appeals from the recommended decisions of individual trustees and District Grievance Committees. In this case of appeals from the decisions of individual trustees, the Judicial Council may admit such oral or written evidence as in its judgment will best and most fairly present the facts, but all appeals from the recommended decisions of District Grievance Committees shall be considered on the record made before such committee. It shall be the duty of the Secretary to notify the parties with respect to its disposition of each case.

Section 4. The Judicial Council may hear appeals from the disciplinary orders of component societies. Provided, however, that such appeals shall be considered on the record made before the component societies.

Section 5. Efforts toward conciliation and compromise shall precede the hearing of all disciplinary cases, but the decision of the Judicial Council shall be final. A party aggrieved by the decision of the Judicial Council may seek an appeal to the Judicial Council of the American Medical Association in accordance with the jurisdiction, rules and regulations of that Association.

Section 6. Component societies are encouraged to create suitable disciplinary procedures which guarantee due process, and to dispose of all disciplinary problems which come to their attention. It is recognized, however, that it may not be feasible for some societies to do so, and the District Grievance Committees hereinafter created, are designed to meet the needs of county societies which are without a functioning grievance committee.

Section 7. The trustee of each district is hereby designated the chairman of his District Grievance Committee. The Judicial Council shall designate two additional trustees from districts adjoining that of the chairman, and the three trustees thus selected shall constitute the District Grievance Committee. All grievances which cannot be resolved by individual trustees, shall be referred to the local grievance committee or the district grievance committee for the district in which the respondent physician or county society resides.

Section 8. District Grievance Committees shall investigate every grievance coming to their attention, taking care that the physician complained of shall have ample opportunity to respond to the complaint. If, after careful investigation the complaint appears to be without merit, the committee shall so report to the Judicial Council, including sufficient facts in its report to enable Judicial Council to form its own conclusions.

If the District Grievance Committee's investigation indicates that the member may be a proper subject of disciplinary action, the committee shall, upon reasonable notice, hold a hearing at which the complainant and the respondent shall be entitled to be represented by counsel, to present the testimony of witnesses in his behalf, and to cross-examine witnesses against him. All testimony shall be under oath and shall be recorded by a competent reporter at the expense of the Association, but shall not be transcribed unless and until an appeal is taken as hereinafter provided.

When all of the testimony has been heard and all evidence received, the committee shall make written findings and recommendations which it shall transmit to the Judicial Council, furnishing copies thereof to the parties.

Section 9. Any party aggrieved by the findings or recommendations of the committee, may, within 30 days, appeal to the Judicial Council. Appeals shall be taken by filing with the Secretary-Treasurer a copy of the entire record made before the District Grievance Committee (including a transcript of the testimony, procured at the appellant's expense) together with a written statement of appeal pointing out in detail wherein the committee has erred, and directing the attention of the Judicial Council to those portions of the transcript upon which he relies, provided, however, that the Judicial Council may extend the time in which the transcript must be filed, upon request made within the initial thirty-day period.

Section 10. No report or opinion of the Judicial Council shall be considered the policy of the Association until approved by the House of Delegates. Any report or opinion of the Judical Council submitted to the House of Delegates may be accepted or rejected or referred back to the Judicial Council but not modified by the House of Delegates.

CHAPTER VIII. COMMITTEES AND COMMISSIONS

Section 1. The Board of Trustees shall have authority from time to time to appoint, fix the duties of, and abolish such standing committees and commissions as it deems necessary or desirable to assist it in carrying on the Association's activities in the fields of business and scientific meetings, medical education and hospitals, legislation, medical services, communications and public service, and governmental medical services.

Section 2. The Executive Committee shall serve as the nominating committee for all standing committee and commission appointments,

but the trustees may make additional nominations. When the Executive Committee sits as such nominating committee, the President-Elect shall serve as Chairman.

Section 3. The President, with the advice and consent of the Chairman of the Board of Trustees, may appoint temporary ad hoc committees to perform specified functions. All such committees shall expire at the end of the term of the President by whom appointed.

Section 4. No committee or commission shall have power or authority to fix or determine Associational policy or to commit the Association to any course of action, such powers being expressly reserved to the House of Delegates and the Board of Trustees.

CHAPTER IX. ASSESSMENTS AND EXPENDITURES

Section 1. The annual dues for membership in this Association shall be as follows: (1) Active Members, [~~$225~~]; $300; (except those physicians elected to KMA membership within six months of the completion of their residency, fellowship or fulfillment of government-obligated service shall pay [~~$112.50~~] $150 their first full year of membership); (2) Life Member, no dues; (3) Associate Members, $25; (4) In-Training Members, $20; (5) Inactive Members, $25; (6) Student Members, no dues; (7) Service Members, no dues; (8) Special Members, no dues. The dues during the first year for any active member shall be pro-rated on the basis of the date of his application. Dues fixed by these Bylaws shall constitute assessments against the component societies. Unless otherwise instructed by the Board of Trustees (which may institute centralized billing) the Secretary of each component society shall forward its assessments, together with its properly classified roster of all officers and members, list of delegates, and list of non-affiliated physicians of the country, to the Secretary-Treasurer of this Association as of the first day of January each year.

Section 2. Unless otherwise provided by the Board of Trustees pursuant to Section 1 hereof, any component society which fails to pay its assessments, or make the report as required, on or before the first day of April in each year, shall be held as suspended and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

Section 3. All motions and resolutions appropriating money shall specify a definite amount or so much thereof as may be necessary for the purpose, and must have prior approval of the Board of Trustees before they can become effective. No motion or resolution, the adoption of which would require a substantial expenditure of funds, shall be considered by the House of Delegates unless the funds have been budgeted or are provided by the motion or resolution.

CHAPTER X. RULES OF CONDUCT

The principles set forth in the Principles of Ethics of the American Medical Association, together with the Constitution and Bylaws of the Association and all duly adopted resolutions of the House of Delegates, shall govern the conduct of members in their relation to each other and to the public.

CHAPTER XI. RULES OF ORDER

The deliberations of this Association shall be governed by parliamentary usage as contained in the latest edition of Sturgis' Standard Code of Parliamentary Procedure, unless otherwise determined by a vote of its respective bodies.

CHAPTER XII. COUNTY SOCIETIES

Section 1. Except as provided in Section 3 of this Chapter, all county medical societies in this State which have adopted principles of organization not in conflict with this Constitution and Bylaws shall, upon application to the House of Delegates, receive a charter from and become a component part of this Association.

The House of Delegates shall have authority to evoke the charter of any component society whose actions are in conflict with the letter or spirit of the Constitution and Bylaws.

Section 2. As rapidly as can be done after the adoption of this Constitution and Bylaws, a medical society shall be organized in every county in the state in which no component society exists, and charters shall be issued thereto.

Section 3. Only one component society shall be chartered in any county. Membership in the component society thus created shall entitle the members thereof to all the rights and benefits of membership in the Kentucky Medical Association.

Section 4. In sparsely settled sections two or more component societies may join for scientific programs, the election of officers, and such other matters as they may deem advisable. The component societies thus combined shall not lose any of their privileges or representation. The active members of each component society shall annually elect at least a Secretary and a Delegate for the transaction of its business with the Association.

Two or more adjacent component societies may also combine into one multi-county component society by adopting resolutions to that effect at special meetings called for that purpose on at least ten days' notice. Copies of the resolution, certified as to their adoption by the Secretary of each society, shall be forwarded to the Headquarters Office. If approved by the Board of Trustees, the multi-county society shall thereupon be issued a charter, the consolidating county societies shall cease to exist and the multi-county society shall become a component society of this Association; provided, however, that the active members residing in each county comprising the multi-county society shall be entitled to elect a delegate or delegates to the House of Delegates, as if each such county constituted a component society within the meaning of Section 11 of this Chapter; and provided, further, that multi-county societies may elect, at large, one alternate delegate for each delegate to which it is entitled under this section and such alternate may serve in the absence of the delegate for whom he is the designated alternate.

A multi-county component society may be disaggregated so that an individual county society may regain independent status when a majority of the members in that county indicate their desire to reorganize. At that time the members from the withdrawing county shall forward a petition containing the signatures of a majority of the members in that county to be validated by KMA. The withdrawing county shall further forward a resolution to the KMA Headquarters Office to be submitted to the House of Delegates at its next regular meeting, requesting recognition as a county society and issuance of a charter, in accord with Chapter XII, Section 1 of the KMA Bylaws. Once this charter is issued, the new county society shall become a recognized entity at the beginning of the following KMA dues year and those counties remaining with the original multi-county unit may continue to function under their pre-existing charter.

Section 5. Each component society shall be the sole judge of the qualifications of its own members. All members of component societies shall be members of the Kentucky Medical Association and shall be classified in accordance with Chapter I, Section 2 of these Bylaws, provided, however, that no physician who is under suspension or who has been expelled shall thereafter, without reinstatement by the Board of Trustees be eligible for membership in any component society. Any physician who desires to become a member of the Kentucky Medical Association shall first apply to the component society in the county in which he resides, for membership therein. Except as hereinafter provided in Sections 6 and/or 8 of this chapter, no physician shall be an active member of a component society in any county other than the county in which he resides.

Section 6. Any physician who may feel aggrieved by the action of the component society of the county in which he resides, in refusing him membership, shall have the right to appeal to the Board of Trustees, which, upon a majority vote, may permit him to apply for membership in a component society in a county which is adjacent to the county in which he resides.

Section 7. When a member in good standing in a component society moves to another county in the State, his name, upon request, shall be transferred without cost to the roster of the component society into whose jurisdiction he moves, if he is admitted to membership therein.

Section 8. A physician whose residence is closer to the headquarters of an adjacent component society than it is to the headquarters of the component society of the county in which he resides, may, with the consent of the component society within whose jurisdiction he resides, hold membership in said adjacent component society.

Section 9. Each component society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material conditions of every physician in the county. Systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Upon reasonable notice and after a hearing, component societies may discipline their members by censure, fine, suspension or expulsion, for any breach of the Principles of Medical Ethics or any bylaw, rule or regulation lawfully adopted by such societies or this Association. At every hearing, the accused shall be entitled to be represented by counsel and to cross-examine witnesses, and the society shall cause a stenographic record to be made of the entire proceedings. The stenographer's notes need not be transcribed unless and until requested by the respondent member.

Any physician aggrieved by the disciplinary action of a component society may, within ninety (90) days, appeal to the Judicial Council, whose decision shall be final. This appeal shall be in writing and shall point out in detail the errors committed by the county society. It shall be accompanied by a transcript of the proceedings before the county society, procured at appellant's expense, and the statement of appeal shall direct the attention of the Judicial Council to those portions of the transcipt upon which he relies.

Any member who fails or refuses to comply with the lawful disciplinary orders of his component society shall, if such failure or refusal continues for more than thirty (30) days, be automatically suspended from membership, provided, however, that an appeal shall stay the suspension until a final decision is made by the Judical Council.

The resignation of a member against whom disciplinary charges are pending or who is in default of the disciplinary judgment of his county society, a district grievance committee or the Board of Trustees shall not be accepted and no member who is suspended or expelled may be reinstated or readmitted unless and until he complies with all lawful orders of his component society and the Board of Trustees.

Section 10. Frequent meetings shall be encouraged and the most attractive programs arranged that are possible. Members shall be especially encouraged to do postgraduate and original research work, and to give the society the first benefit of such labors. Official positions and other references shall be unstintingly given to such members.

Section 11. At the time of the annual election of officers, each component society shall elect a delegate or delegates to represent it in the House of Delegates. The term of a delegate shall commence on the first day of the regular session of the House following his election, and shall end on the day before the first day of the next regular session, provided, however, that component societies may elect delegates for more than one term at any election. Each component society may elect one delegate for each 25 voting members in good standing, plus one delegate for one or more voting members in excess of multiples of 25, provided, however that each component society shall be entitled to at least one delegate regardless of the number of voting members it may have and that each multi-county society shall be entitled to the same number of delegates as its component societies would have had. The secretary of the society shall send a list of such delegates to the Secretary-Treasurer of this Association not later than 45 days before the next Annual Meeting. It shall be the obligation of a component society which elects delegates to serve more than one year, to provide the KMA Headquarters Office with a certified list of its delegates each year.

Section 12. The secretary of each component society shall keep a roster of its members and a list of nonaffiliated licensed physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information upon blanks supplied him for the purpose, to the Secretary-Treasurer of the Association, on the first day of January of each year or as soon thereafter as possible, and at the same time the dues accruing from the annual assessment are sent in. In keeping such roster the secretary shall note any change in the personnel of the profession by death or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

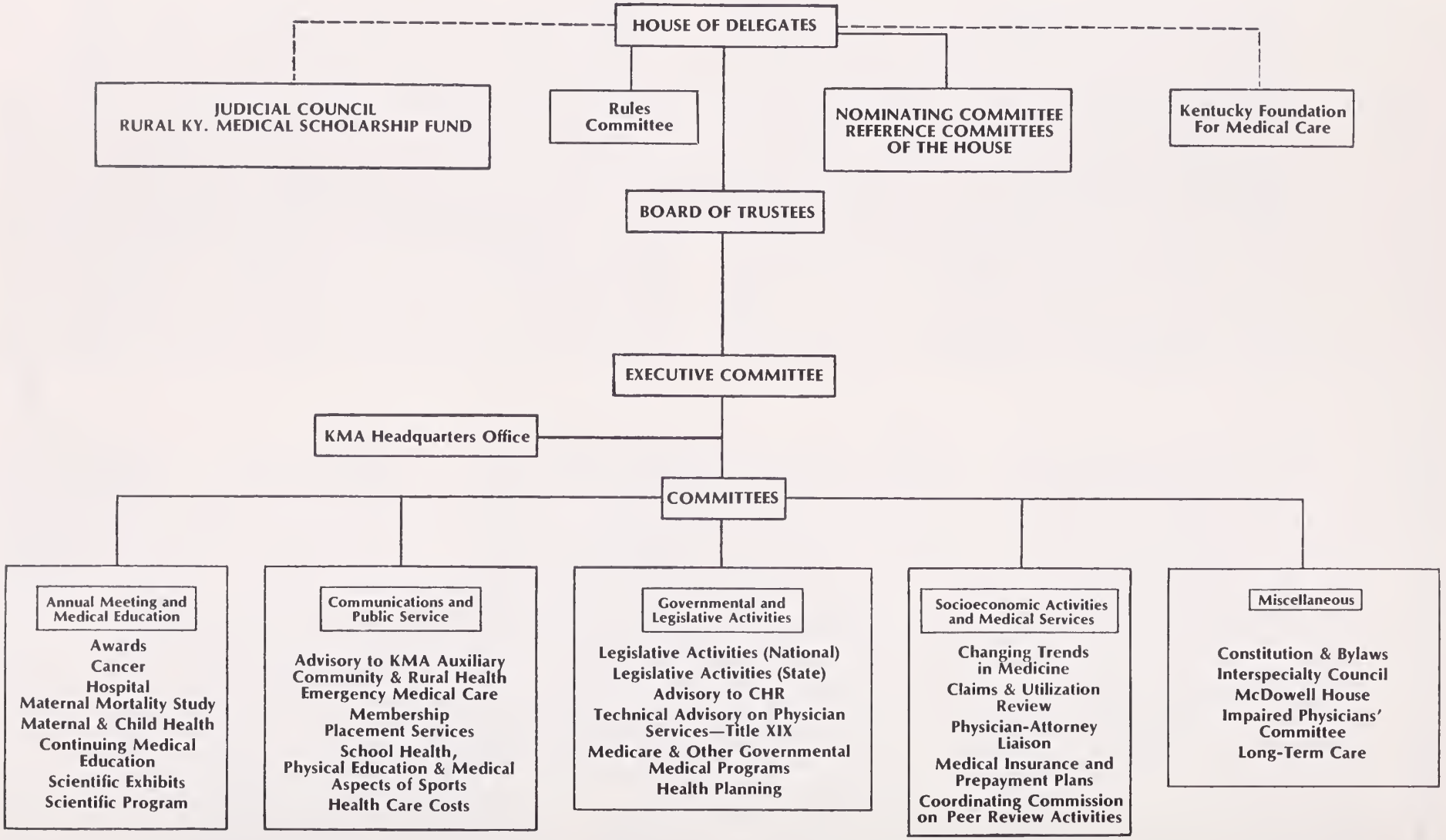
CHAPTER XIII. AMENDMENTS

Section 1. These bylaws may be amended at any session of the House of Delegates by a majority vote of the Delegates present at a meeting of that session, provided: (1) the amendment proposed is presented in writing to the Delegates thirty days prior to the meeting, or (2) the amendment is introduced in writing at a regular meeting of the House of Delegates during the session and considered at the following meeting of the session, the vote on said amendment having been postponed definitely for a period of at least one day.

Section 2. An amendment to or change in the bylaws may be proposed by a reference committee or by the Board of Trustees at the final meeting of a session of the House of Delegates, but, not having been postponed definitely for a period of one day, requires a two-thirds vote.

Section 3. An amendment to these bylaws may be proposed in writing by an individual Delegate at the final meeting of a session of the House of Delegates. If such an amendment is proposed, the proposal will be postponed definitely and studied by the appropriate reference committee at that time, reporting their recommendation back to the House of Delegates before the final meeting is adjourned. Such an amendment, having not been postponed definitely for a period of one day, requires a two-thirds vote.

KMA Organization Chart—Revised November 1983



1983-84 KMA COMMITTEES

Advisory Committee to the KMA Auxiliary

Dwight L. Blackburn, M.D., Berea, Chairman
Ballard W. Cassady, M.D., Pikeville
James B. Holloway, Jr., M.D., Lexington
Arthur H. Keeney, M.D., Louisville

Scientific Program Committee

James A. Baumgarten, M.D., Owensboro, Chairman
Peter C. Campbell, M.D., Louisville
Max A. Crocker, M.D., Lexington
James B. Holloway, Jr., M.D. Lexington
Hiram C. Polk, Jr., M.D., Louisville
Charles C. Smith, Jr., M.D., Louisville
George Thomas, M.D., Hopkinsville

Scientific Exhibits Committee

Richard A. Kielar, M.D., Lexington, Chairman
James P. Moss, M.D., Louisville
John W. Ratliff, M.D., Lebanon
Sibu Saha, M.D., Lexington
Joseph Kline, Jr., Ph.D., Louisville (student)

Awards Committee

S. Randolph Scheen, M.D., Louisville, Chairman
Delmas M. Clardy, M.D., Hopkinsville
Robert S. Howell, M.D., Louisville
David A. Hull, M.D., Lexington
Edward N. Maxwell, M.D., Louisville
Wyatt Norvell, M.D., New Castle
Paul J. Parks, M.D., Bowling Green

Continuing Medical Education Committee

James E. Redmon, Jr., M.D. Louisville, Chairman
Garry N. Binegar, M.D., Owensboro
Charles M. Brohm, M.D., Louisville
John W. Cullen, M.D., Lexington
Stuart Graves, Jr., M.D., Louisville
John M. Johnstone, M.D., Berea
Frank R. Lemon, M.D., Lexington
Sally S. Mattingly, M.D., Lexington
James A. Parrott, M.D., Hopkinsville
Robert W. Powell, M.D., Louisville
Bruce M. Stapleton, M.D., Ashland

Ex-Officio:

Constance Fulmer, Ph.D., Lexington
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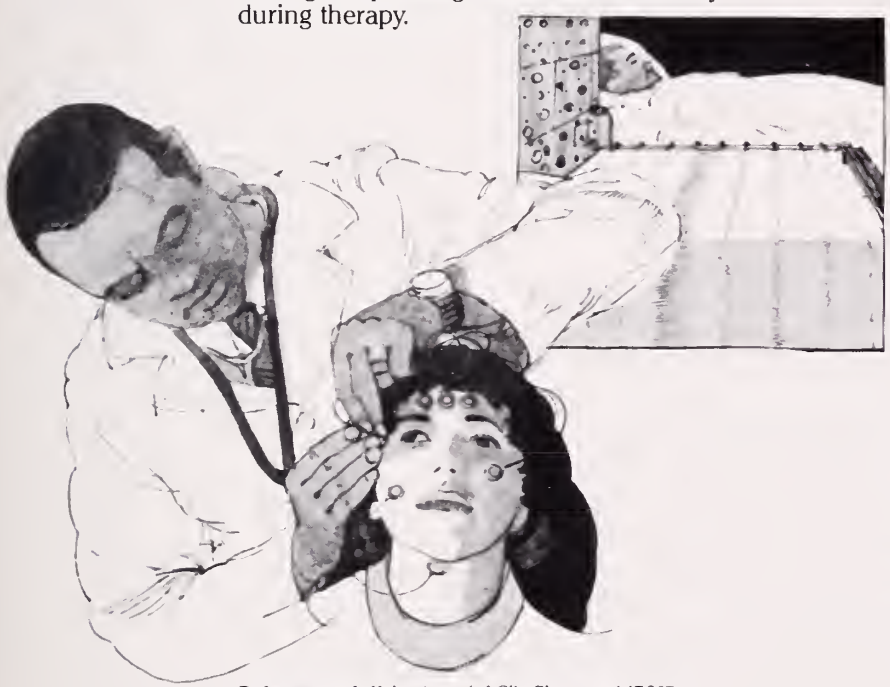
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References: 1. Kales A *et al: J Clin Pharmacol 17*:207-213, Apr 1977 and data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Kales A: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **4.** Kales A *et al: JAMA 241*:1692-1695, Apr 20, 1979. **5.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 15, 1978. **6.** Kales A *et al: Clin Pharmacol Ther 19*:576-583, May 1976. **7.** Kales A, Kales JD: *Pharmacol Physicians 4*:1-6, Sep 1970. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Dement WC *et al: Behav Med 5*:25-31, Oct 1978. **10.** Vogel GW: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **11.** Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington, DC, May 3-7, 1971. **12.** Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytime sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. **13.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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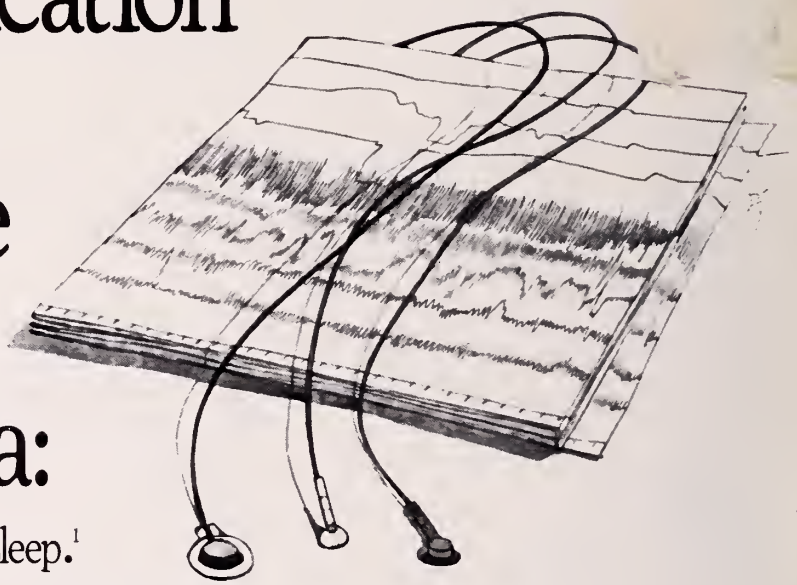
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